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Tsuchiya, Masayuki
Hirata, Yuichi

<120> ANTI-MPL ANTIBODIES

<130> 14875-153US1

<150> PCT/JP2004/018506
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<150> JP 2003-415746
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<212> PRT
<213> Mus musculus

<400> 116

His Gln Trp Ser Ser Tyr Pro Trp Thr
1 5

<210> 117
<211> 354
<212> DNA
<213> Mus musculus

<400> 117
caggttcagc tgcagcagtc tggacctgag ctggtgaagc ctggggcctc agtgaagatt 60

tcctgcaagg cttctggcta tgcattcact aactcctgga tgaactgggt gaagcagagg 120

cctggaaagg gtcttgagtg gattggacgg atttatcctg gagatggaga aactatctac 180

aatgggaaat tcagggtcaa ggccacactg actgcagaca aatcctccag cacagcctac 240

atggatatca gcagcctgac atctgaggac tctgcggtct acttctgtgc aagaggctat 300

gatgattact cgtttgctta ctggggccaa gggactctgg tcactgtctc tgca 354

<210> 118
<211> 118
<212> PRT
<213> Mus musculus

<400> 118

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Ser
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe
50 55 60

Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Asp Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala
115

<210> 119
<211> 336
<212> DNA
<213> Mus musculus

<400> 119
gatattgtga tgactcaggc tgcaccctct atacctgtca ctcctggaga gtcagtatcc 60

atctcctgta ggtctagtaa gagtctcctg catagtaatg gcaacactta cttgtattgg 120

ttcctgcaga ggccaggcca gtctcctcaa ctcctgatat atcggatgtc caaccttgcc 180

tcaggagtcc cagataggtt cagtggcagt gggtcaggaa ctgctttcac actgagaatc 240

agtagagtgg aggctgagga tgtgggtgtt tattactgta tgcaacatat agaatatcct 300

tttacgttcg gatcggggac caagctggaa ataaaa 336

<210> 120
<211> 112
<212> PRT
<213> Mus musculus

<400> 120

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Ile Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

```
Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95

Ile Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 121
<211> 762
<212> DNA
<213> Mus musculus

<400> 121
atggaatggc ctttgatctt tctcttcctc ctgtcaggaa ctgcaggtgt ccactcccag 60

gttcagctgc agcagtctgg acctgagctg gtgaagcctg gggcctcagt gaagatttcc 120

tgcaaggctt ctggctatgc attcactaac tcctggatga actgggtgaa gcagaggcct 180

ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat 240

gggaaattca gggtcaaggc cacactgact gcagacaaat cctccagcac agcctacatg 300

gatatcagca gcctgacatc tgaggactct gcggtctact tctgtgcaag aggctatgat 360

gattactcgt ttgcttactg gggccaaggg actctggtca ctgtctctgc aggtggtggt 420

ggttcggata ttgtgatgac tcaggctgca ccctctatac ctgtcactcc tggagagtca 480

gtatccatct cctgtaggtc tagtaagagt ctcctgcata gtaatggcaa cacttacttg 540

tattggttcc tgcagaggcc aggccagtct cctcaactcc tgatatatcg gatgtccaac 600

cttgcctcag gagtcccaga taggttcagt ggcagtgggt caggaactgc tttcacactg 660

agaatcagta gagtggaggc tgaggatgtg ggtgtttatt actgtatgca acatatagaa 720

tatcctttta cgttcggatc ggggaccaag ctggaaataa aa 762

<210> 122
<211> 254
<212> PRT
<213> Mus musculus

<400> 122

```
Met Glu Trp Pro Leu Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly
1               5                  10                  15

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys
            20                  25                  30

Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe
        35                  40                  45

Thr Asn Ser Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu
    50                  55                  60

Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn
65                  70                  75                  80

Gly Lys Phe Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser
                85                  90                  95

Thr Ala Tyr Met Asp Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
            100                 105                 110

Tyr Phe Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
        115                 120                 125

Gln Gly Thr Leu Val Thr Val Ser Ala Gly Gly Gly Gly Ser Asp Ile
    130                 135                 140

Val Met Thr Gln Ala Ala Pro Ser Ile Pro Val Thr Pro Gly Glu Ser
145                 150                 155                 160

Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly
                165                 170                 175

Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser Pro Gln
            180                 185                 190

Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg
        195                 200                 205

Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile Ser Arg
    210                 215                 220
```

```
Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu
225                 230                 235                 240

Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
                245                 250
```

<210> 123
<211> 635
<212> PRT
<213> Homo sapiens

<400> 123

```
Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu Leu Leu Ala
1               5                   10                  15

Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser Leu Leu Ala
            20                  25                  30

Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe Glu Asp Leu
        35                  40                  45

Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly Thr Tyr Gln
    50                  55                  60

Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys Pro Leu Ser
65                  70                  75                  80

Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro
                85                  90                  95

Asp Gln Glu Glu Val Arg Leu Phe Phe Pro Leu His Leu Trp Val Lys
            100                 105                 110

Asn Val Phe Leu Asn Gln Thr Arg Thr Gln Arg Val Leu Phe Val Asp
        115                 120                 125

Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly
    130                 135                 140

Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Glu Pro Ala Pro Glu
145                 150                 155                 160

Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Arg Asp Pro
                165                 170                 175
```

```
Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr
            180                 185                 190

Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
        195                 200                 205

Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln
    210                 215                 220

Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu Gly Gly Ser
225                 230                 235                 240

Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu
                245                 250                 255

Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp
            260                 265                 270

Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Leu Gly
        275                 280                 285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln
    290                 295                 300

Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala
305                 310                 315                 320

Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn Cys Glu Glu
                325                 330                 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys
            340                 345                 350

His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu Val Glu Val
        355                 360                 365

Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser Pro Phe Trp
    370                 375                 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu
385                 390                 395                 400
```

```
Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
                405                 410                 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
            420                 425                 430

Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr
        435                 440                 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg
    450                 455                 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro
465                 470                 475                 480

Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr
                485                 490                 495

Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu
            500                 505                 510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu
        515                 520                 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg
    530                 535                 540

Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys
545                 550                 555                 560

Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu
                565                 570                 575

Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ala Gln Met Asp Tyr Arg
            580                 585                 590

Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro
        595                 600                 605

Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His
    610                 615                 620
```

Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
625 630 635

<210> 124
<211> 122
<212> PRT
<213> Mus musculus

<400> 124

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Thr Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Gly Trp Ile Leu Ala Asp Gly Gly Tyr Ser Phe Ala Tyr Trp
100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ala
115 120

<210> 125
<211> 112
<212> PRT
<213> Mus musculus

<400> 125

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Ile Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

```
Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln His
                85                  90                  95

Leu Glu Tyr Pro Phe Thr Phe Gly Thr Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 126
<211> 118
<212> PRT
<213> Mus musculus

<400> 126

```
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser
            20                  25                  30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe
    50                  55                  60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80

Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
                85                  90                  95

Ala Arg Gly Tyr Ala Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
            100                 105                 110
```

Leu Val Thr Val Ser Ala
115

<210> 127
<211> 112
<212> PRT
<213> Mus musculus

<400> 127

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 128
<211> 118
<212> PRT
<213> Mus musculus

<400> 128

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

```
Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Tyr Asn Gly Lys Phe
    50                  55                  60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Asn Thr Ala Tyr
65                  70                  75                  80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
                85                  90                  95

Ala Arg Gly Phe Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ala
        115
```

<210> 129
<211> 112
<212> PRT
<213> Mus musculus

<400> 129

```
Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1               5                   10                  15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
            20                  25                  30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Ala Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65                  70                  75                  80

Ser Arg Val Glu Thr Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 130
<211> 118
<212> PRT
<213> Mus musculus

<400> 130

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Ser Ser
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Ser Gly Tyr Ala Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala
115

<210> 131
<211> 112
<212> PRT
<213> Mus musculus

<400> 131

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

```
Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 132
<211> 118
<212> PRT
<213> Mus musculus

<400> 132

```
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Arg Ser
            20                  25                  30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe
    50                  55                  60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
                85                  90                  95

Ala Ser Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ala
        115
```

<210> 133

<211> 112
<212> PRT
<213> Mus musculus

<400> 133

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 134
<211> 118
<212> PRT
<213> Mus musculus

<400> 134

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Arg Ala Phe Gly Tyr Ala Phe Ser Asn Ser
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Asn Asn Gly Lys Phe
50 55 60

```
Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
                85                  90                  95

Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ala
        115
```

<210> 135
<211> 112
<212> PRT
<213> Mus musculus

<400> 135

```
Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1               5                   10                  15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
            20                  25                  30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Ala Ala Phe Thr Leu Arg Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 136
<211> 115
<212> PRT
<213> Mus musculus

<400> 136

```
Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr
            20                  25                  30

Trp Val Asn Trp Val Lys Gln Arg Pro Gly Arg Gly Leu Glu Trp Ile
        35                  40                  45

Gly Arg Ile His Pro Ser Asp Ser Glu Thr His Cys Asn Gln Lys Phe
    50                  55                  60

Lys Arg Lys Ala Thr Leu Thr Val Asn Lys Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80

Ile Gln Leu His Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95

Thr Ser Gly Gly Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr
            100                 105                 110

Val Ser Ala
        115


<210>  137
<211>  112
<212>  PRT
<213>  Mus musculus

<400>  137

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1               5                   10                  15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser
            20                  25                  30

Asn Gly Asn Ile Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
```

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 138
<211> 118
<212> PRT
<213> Mus musculus

<400> 138

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Asn Asn Gly Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala
115

<210> 139
<211> 112
<212> PRT
<213> Mus musculus

<400> 139

```
Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1               5                  10                  15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
            20                  25                  30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Ala Ala Phe Thr Leu Arg Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 140
<211> 118
<212> PRT
<213> Mus musculus

<400> 140

```
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1               5                  10                  15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Thr Ser
            20                  25                  30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Ala Asn Tyr Asn Gly Lys Phe
    50                  55                  60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Ser Ala Tyr
65                  70                  75                  80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
                85                  90                  95
```

```
Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ala
        115

<210>  141
<211>  112
<212>  PRT
<213>  Mus musculus

<400>  141

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1               5                   10                  15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
            20                  25                  30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Met Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95

Val Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110

<210>  142
<211>  118
<212>  PRT
<213>  Mus musculus

<400>  142

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser
```

20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Pro Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Tyr Asn Gly Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Val Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala
115

<210> 143
<211> 112
<212> PRT
<213> Mus musculus

<400> 143

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 144
<211> 118
<212> PRT
<213> Mus musculus

<400> 144

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Leu Asn Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Arg Ser
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Tyr Asn Gly Lys Phe
50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr
65 70 75 80

Met Gln Phe Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Gly Asp Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala
115

<210> 145
<211> 112
<212> PRT
<213> Mus musculus

<400> 145

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser

```
            20                  25                  30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 146
<211> 115
<212> PRT
<213> Mus musculus

<400> 146

```
Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala
1               5                   10                  15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
            20                  25                  30

Trp Val Asn Trp Val Lys Gln Arg Pro Gly Arg Gly Leu Glu Trp Ile
        35                  40                  45

Gly Arg Ile His Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe
    50                  55                  60

Lys Asn Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr
65                  70                  75                  80

Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Ser Gly Gly Trp Phe Ala Ser Trp Gly Gln Gly Thr Leu Val Thr
            100                 105                 110
```

Val Ser Ala
115

<210> 147
<211> 112
<212> PRT
<213> Mus musculus

<400> 147

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Thr Ile
65 70 75 80

Ser Ser Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 148
<211> 115
<212> PRT
<213> Mus musculus

<400> 148

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr
20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Arg Gly Leu Glu Trp Ile
35 40 45

```
Gly Arg Ile His Pro Phe Asp Ser Glu Thr His Cys Ser Gln Lys Phe
    50                  55                  60

Lys Asn Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr
65                  70                  75                  80

Ile Gln Phe Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
                85                  90                  95

Ser Ser Gly Gly Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr
            100                 105                 110

Val Ser Ala
        115
```

<210> 149
<211> 112
<212> PRT
<213> Mus musculus

<400> 149

```
Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Ser Val Thr Pro Gly
1               5                   10                  15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser
            20                  25                  30

Asn Gly Asn Ile Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 150
<211> 118
<212> PRT
<213> Mus musculus

<400> 150

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Ser
20 25 30

Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe
50 55 60

Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr
65 70 75 80

Met Glu Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala
115

<210> 151
<211> 112
<212> PRT
<213> Mus musculus

<400> 151

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Asn
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

```
Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95

Ile Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
            100                 105                 110
```

<210> 152
<211> 118
<212> PRT
<213> Mus musculus

<400> 152

```
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Asn Ser
            20                  25                  30

Trp Met Asn Trp Val Asn Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Ile Tyr Asn Gly Asn Phe
    50                  55                  60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Ile Ala Tyr
65                  70                  75                  80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
                85                  90                  95

Thr Ser Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ala
        115
```

<210> 153

<211> 112
<212> PRT
<213> Mus musculus

<400> 153

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 154
<211> 423

<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (1)..(423)

<400> 154
atg gtt ctt gcc agc tct acc acc agc atc cac acc atg ctg ctc ctg 48
Met Val Leu Ala Ser Ser Thr Thr Ser Ile His Thr Met Leu Leu Leu
1 5 10 15

ctc ctg atg ctg gcc cag ccg gcc atg gcg gaa gtg aag ctg gtg gag 96
Leu Leu Met Leu Ala Gln Pro Ala Met Ala Glu Val Lys Leu Val Glu
20 25 30

tct ggg gga ggc tta gtg aag cct gga ggg tcc cgg aaa ctc tcc tgt 144
Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Arg Lys Leu Ser Cys
35 40 45

```
gca gcc tct gga ttc act ttc agt agc tat acc atg tct tgg gtt cgc      192
Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Thr Met Ser Trp Val Arg
    50                  55                  60

cag act ccg gcg aag agg ctg gag tgg gtc gca acc att agt agt ggc      240
Gln Thr Pro Ala Lys Arg Leu Glu Trp Val Ala Thr Ile Ser Ser Gly
65                  70                  75                  80

agt agt acc atc tac tat gca gac aca gtg aag ggc cga ttc acc atc      288
Ser Ser Thr Ile Tyr Tyr Ala Asp Thr Val Lys Gly Arg Phe Thr Ile
                85                  90                  95

tcc aga gac aat gcc aag aac acc ctg ttc ctg caa atg acc agt cta      336
Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln Met Thr Ser Leu
            100                 105                 110

agg tct gag gac aca gcc atg tat tac tgt gca agg aga tgg ttt ctt      384
Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala Arg Arg Trp Phe Leu
        115                 120                 125

gac tgc tgg ggc caa ggc acc act ctc aca gtc tcc tcg                  423
Asp Cys Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
    130                 135                 140
```

<210> 155
<211> 141
<212> PRT
<213> Mus musculus

<400> 155

```
Met Val Leu Ala Ser Ser Thr Thr Ser Ile His Thr Met Leu Leu Leu
1               5                   10                  15

Leu Leu Met Leu Ala Gln Pro Ala Met Ala Glu Val Lys Leu Val Glu
            20                  25                  30

Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Arg Lys Leu Ser Cys
        35                  40                  45

Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Thr Met Ser Trp Val Arg
    50                  55                  60

Gln Thr Pro Ala Lys Arg Leu Glu Trp Val Ala Thr Ile Ser Ser Gly
65                  70                  75                  80

Ser Ser Thr Ile Tyr Tyr Ala Asp Thr Val Lys Gly Arg Phe Thr Ile
                85                  90                  95
```

```
Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln Met Thr Ser Leu
            100                 105                 110

Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala Arg Arg Trp Phe Leu
        115                 120                 125

Asp Cys Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser
    130                 135                 140
```

<210> 156
<211> 357
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (1)..(357)

<400> 156

```
gat att gtg ctc acc caa tct cca gct tct ttg gct gtg tct cta ggg       48
Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
1               5                   10                  15

cag agt gtc acc atc tcc tgc aga gcc agt gaa agt gtt gaa tat tat       96
Gln Ser Val Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Glu Tyr Tyr
            20                  25                  30

ggc act agt tta atg cag tgg tac caa cag aaa cca gga cag cca ccc      144
Gly Thr Ser Leu Met Gln Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
        35                  40                  45

aaa ctc ctc atc tat ggt gca tcc aac gta gaa tct ggg gtc cct gcc      192
Lys Leu Leu Ile Tyr Gly Ala Ser Asn Val Glu Ser Gly Val Pro Ala
    50                  55                  60

agg ttt agt ggc agt ggg tct ggg aca gac ttc agc ctc aac atc cat      240
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Leu Asn Ile His
65                  70                  75                  80

cct gtg gag gag gat gat att gca atg tat ttc tgt cag caa agt agg      288
Pro Val Glu Glu Asp Asp Ile Ala Met Tyr Phe Cys Gln Gln Ser Arg
                85                  90                  95

aag gtt ccg tgg acg ttc ggt gga ggc acc aag ctg gaa ata aag gac      336
Lys Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Asp
            100                 105                 110

tac aag gat gac gac gat aag                                         357
Tyr Lys Asp Asp Asp Asp Lys
        115
```

<210> 157

<211> 119
<212> PRT
<213> Mus musculus

<400> 157

Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val Ser Leu Gly
1 5 10 15

Gln Ser Val Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Glu Tyr Tyr
20 25 30

Gly Thr Ser Leu Met Gln Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
35 40 45

Lys Leu Leu Ile Tyr Gly Ala Ser Asn Val Glu Ser Gly Val Pro Ala
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Leu Asn Ile His
65 70 75 80

Pro Val Glu Glu Asp Asp Ile Ala Met Tyr Phe Cys Gln Gln Ser Arg
85 90 95

Lys Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Asp
100 105 110

Tyr Lys Asp Asp Asp Asp Lys
115

<210> 158
<211> 432
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (1)..(432)

<400> 158
atg gtt ctt gcc agc tct acc acc agc atc cac acc atg ctg ctc ctg 48
Met Val Leu Ala Ser Ser Thr Thr Ser Ile His Thr Met Leu Leu Leu
1 5 10 15

ctc ctg atg ctg gcc cag ccg gcc atg gcg cag gtt cag ctc cag caa 96
Leu Leu Met Leu Ala Gln Pro Ala Met Ala Gln Val Gln Leu Gln Gln
20 25 30

tct gga cct gag ctg gtg aag cct ggg gcc tca gtg aag att tcc tgc 144

```
Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Val Lys Ile Ser Cys
        35                  40                  45

aag gct tct ggc tat gca ttc agt agc tcc tgg atg aac tgg atg aag      192
Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser Trp Met Asn Trp Met Lys
    50                  55                  60

cag agg cct gga aag ggt ctt gag tgg att ggg cgg att tat cct gga      240
Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly
65                  70                  75                  80

gat gga gat act aac tac aat ggg aag ttc aag ggc aag gcc aca ctg      288
Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe Lys Gly Lys Ala Thr Leu
                85                  90                  95

act gca gac aaa tcc tcc agc aca gcc tac atg caa ctc agc agc ctg      336
Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu
            100                 105                 110

aca tct gag gac tct gcg gtc tac ttc tgt gca aga gcg agg aaa act      384
Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg Ala Arg Lys Thr
        115                 120                 125

tcc tgg ttt gct tac tgg ggc caa ggg act ctg gtc act gtc tct gcg      432
Ser Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
    130                 135                 140
```

<210> 159
<211> 144
<212> PRT
<213> Mus musculus

<400> 159

```
Met Val Leu Ala Ser Ser Thr Thr Ser Ile His Thr Met Leu Leu Leu
1               5                   10                  15

Leu Leu Met Leu Ala Gln Pro Ala Met Ala Gln Val Gln Leu Gln Gln
            20                  25                  30

Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Val Lys Ile Ser Cys
        35                  40                  45

Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser Trp Met Asn Trp Met Lys
    50                  55                  60

Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly
65                  70                  75                  80

Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe Lys Gly Lys Ala Thr Leu
                85                  90                  95
```

```
Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu
            100                 105                 110

Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys Ala Arg Ala Arg Lys Thr
        115                 120                 125

Ser Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala
    130                 135                 140
```

<210> 160
<211> 345
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (1)..(345)

<400> 160

```
gac att gtg ttg aca cag tct caa aaa ttc atg tcc aca tca gta gga       48
Asp Ile Val Leu Thr Gln Ser Gln Lys Phe Met Ser Thr Ser Val Gly
1               5                   10                  15

gac agg gtc agc atc agc tgc aag gcc agt cag aat gtg ggt aat att       96
Asp Arg Val Ser Ile Ser Cys Lys Ala Ser Gln Asn Val Gly Asn Ile
            20                  25                  30

ata gcc tgg tat caa cag aaa cca ggg caa tct cct aaa gca ctg att      144
Ile Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile
        35                  40                  45

tac ttg gca tcc tac cgg tac agt gga gtc cct gat cgc ttc aca ggc      192
Tyr Leu Ala Ser Tyr Arg Tyr Ser Gly Val Pro Asp Arg Phe Thr Gly
    50                  55                  60

agt gga tct ggg aca gat ttc act ctc acc att agt aat gtg cag tct      240
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser
65                  70                  75                  80

gaa gac ttg gca gag tat ttc tgt cag caa tat agc agc tct ccg ctc      288
Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Ser Ser Ser Pro Leu
                85                  90                  95

acg ttc ggt gct ggg acc aag ctg gaa ata aag gac tac aag gat gac      336
Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile Lys Asp Tyr Lys Asp Asp
            100                 105                 110

gac gat aag                                                         345
Asp Asp Lys
        115
```

<210> 161
<211> 115
<212> PRT
<213> Mus musculus

<400> 161

Asp Ile Val Leu Thr Gln Ser Gln Lys Phe Met Ser Thr Ser Val Gly
1 5 10 15

Asp Arg Val Ser Ile Ser Cys Lys Ala Ser Gln Asn Val Gly Asn Ile
20 25 30

Ile Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile
35 40 45

Tyr Leu Ala Ser Tyr Arg Tyr Ser Gly Val Pro Asp Arg Phe Thr Gly
50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser
65 70 75 80

Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Ser Ser Ser Pro Leu
85 90 95

Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile Lys Asp Tyr Lys Asp Asp
100 105 110

Asp Asp Lys
115

<210> 162
<211> 116
<212> PRT
<213> Mus musculus

<400> 162

Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
1 5 10 15

Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Asp
20 25 30

Tyr Ala Trp Ser Trp Ile Arg Gln Leu Pro Gly Asn Lys Leu Glu Trp
35 40 45

```
Met Gly Tyr Ile Thr Tyr Ser Gly Tyr Ser Ile Tyr Asn Pro Ser Leu
    50                  55                  60

Lys Ser Arg Ile Ser Ile Ser Arg Asp Thr Ser Lys Asn Gln Leu Phe
65                  70                  75                  80

Leu Gln Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr Cys
                85                  90                  95

Val Gly Gly Tyr Asp Asn Met Asp Tyr Trp Gly Gln Gly Thr Ser Val
            100                 105                 110

Thr Val Ser Ser
        115
```

<210> 163
<211> 108
<212> PRT
<213> Mus musculus

<400> 163

```
Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
1               5                   10                  15

Glu Lys Val Thr Leu Thr Cys Ser Ala Ser Ser Ser Val Ser Ser Ser
            20                  25                  30

His Leu Tyr Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro Lys Leu Trp
        35                  40                  45

Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser
    50                  55                  60

Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Asn Met Glu
65                  70                  75                  80

Thr Glu Asp Ala Ala Ser Tyr Phe Cys His Gln Trp Ser Ser Tyr Pro
                85                  90                  95

Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
            100                 105
```

<210> 164

<211> 1924
<212> DNA
<213> Macaca fascicularis

<220>
<221> CDS
<222> (11)..(1918)

<400> 164

```
gaattccacc atg ccc tcc tgg gcc ctc ttc atg gtc acc tcc tgc ctc        49
           Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu
           1               5                   10

ctc ctg gcc cct caa aac ctg gcc caa gtc agc agc caa gat gtc tcc        97
Leu Leu Ala Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser
    15                  20                  25

ttg ctg gcc tcg gac tca gag ccc ctg aag tgt ttc tcc cga aca ttt       145
Leu Leu Ala Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe
30                  35                  40                  45

gag gac ctc act tgc ttc tgg gat gag gaa gag gca gca ccc agt ggg       193
Glu Asp Leu Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly
                50                  55                  60

aca tac cag ctg ctg tat gcc tac ccg ggg gag aag ccc cgt gcc tgc       241
Thr Tyr Gln Leu Leu Tyr Ala Tyr Pro Gly Glu Lys Pro Arg Ala Cys
            65                  70                  75

ccc ctg agt tct cag agc gtg ccc cgc ttt gga acc cga tac gtg tgc       289
Pro Leu Ser Ser Gln Ser Val Pro Arg Phe Gly Thr Arg Tyr Val Cys
        80                  85                  90

cag ttt cca gcc cag gaa gaa gtg cgt ctc ttc tct ccg ctg cac ctc       337
Gln Phe Pro Ala Gln Glu Glu Val Arg Leu Phe Ser Pro Leu His Leu
    95                  100                 105

tgg gtg aag aat gtg ttc cta aac cag act cag att cag cga gtc ctc       385
Trp Val Lys Asn Val Phe Leu Asn Gln Thr Gln Ile Gln Arg Val Leu
110                 115                 120                 125

ttt gtg gac agt gta ggc ctg ccg gct ccc ccc agt atc atc aag gcc       433
Phe Val Asp Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala
                130                 135                 140

atg ggt ggg agc cag cca ggg gaa ctt cag atc agc tgg gag gcc cca       481
Met Gly Gly Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Ala Pro
            145                 150                 155

gct cca gaa atc agt gat ttc ctg agg tac gaa ctc cgc tat ggc ccc       529
Ala Pro Glu Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro
        160                 165                 170

aaa gat ctc aag aac tcc act ggt ccc acg gtc ata cag ttg atc gcc       577
Lys Asp Leu Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala
    175                 180                 185
```

```
aca gaa acc tgc tgc cct gct ctg cag agg cca cac tca gcc tct gct      625
Thr Glu Thr Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala
190                 195                 200                 205

ctg gac cag tct cca tgt gct cag ccc aca atg ccc tgg caa gat gga      673
Leu Asp Gln Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly
                210                 215                 220

cca aag cag acc tcc cca act aga gaa gct tca gct ctg aca gca gtg      721
Pro Lys Gln Thr Ser Pro Thr Arg Glu Ala Ser Ala Leu Thr Ala Val
            225                 230                 235

ggt gga agc tgc ctc atc tca gga ctc cag cct ggc aac tcc tac tgg      769
Gly Gly Ser Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp
        240                 245                 250

ctg cag ctg cgc agc gaa cct gat ggg atc tcc ctc ggt ggc tcc tgg      817
Leu Gln Leu Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp
    255                 260                 265

gga tcc tgg tcc ctc cct gtg act gtg gac ctg cct gga gat gca gtg      865
Gly Ser Trp Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val
270                 275                 280                 285

gca att gga ctg caa tgc ttt acc ttg gac ctg aag aat gtt acc tgt      913
Ala Ile Gly Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys
                290                 295                 300

caa tgg cag caa gag gac cat gct agt tcc caa ggt ttc ttc tac cac      961
Gln Trp Gln Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His
            305                 310                 315

agc agg gca cgg tgc tgc ccc aga gac agg tac ccc atc tgg gag gac     1009
Ser Arg Ala Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asp
        320                 325                 330

tgt gaa gag gaa gag aaa aca aat cca gga tta cag acc cca cag ttc     1057
Cys Glu Glu Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe
    335                 340                 345

tct cgc tgc cac ttc aag tca cga aat gac agc gtt att cac atc ctt     1105
Ser Arg Cys His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu
350                 355                 360                 365

gtg gag gtg acc aca gcc ctg ggt gct gtt cac agt tac ctg ggc tcc     1153
Val Glu Val Thr Thr Ala Leu Gly Ala Val His Ser Tyr Leu Gly Ser
                370                 375                 380

cct ttc tgg atc cac cag gct gtg cgc ctc ccc acc cca aac ttg cac     1201
Pro Phe Trp Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His
            385                 390                 395

tgg agg gag atc tcc agc ggg cat ctg gaa ttg gag tgg cag cac cca     1249
Trp Arg Glu Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro
        400                 405                 410

tca tcc tgg gca gcc caa gag acc tgc tat caa ctc cga tac aca gga     1297
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Ser Ser Trp Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly
    415                 420                 425

gaa ggc cat cag gac tgg aag gtg ctg gag ccg cct ctc ggg gcc cga     1345
Glu Gly His Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg
430                 435                 440                 445

gga ggg acc ctg gag ctg cgc ccg cga tct cgc tac cgt tta cag ctg     1393
Gly Gly Thr Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu
                450                 455                 460

cgc gcc agg ctc aat ggc ccc acc tac caa ggt ccc tgg agc tcg tgg     1441
Arg Ala Arg Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp
            465                 470                 475

tcg gac cca gct agg gtg gag acc gcc acc gag acc gcc tgg att tcc     1489
Ser Asp Pro Ala Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser
        480                 485                 490

ttg gtg acc gct ctg ctg cta gtg ctg ggc ctc agc gcc gtc ctg ggc     1537
Leu Val Thr Ala Leu Leu Leu Val Leu Gly Leu Ser Ala Val Leu Gly
    495                 500                 505

ctg ctg ctg ctg agg tgg cag ttt cct gca cac tac agg aga ctg agg     1585
Leu Leu Leu Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg
510                 515                 520                 525

cat gcc ctg tgg ccc tca ctt cca gat ctg cac cga gtc cta ggc cag     1633
His Ala Leu Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln
                530                 535                 540

tac ctt agg gac act gca gcc ctg agt ccg ccc aag gcc aca gtc tca     1681
Tyr Leu Arg Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser
            545                 550                 555

gat acc tgt gaa gaa gtg gaa ccc agc ctc ctt gaa atc ctc ccc aag     1729
Asp Thr Cys Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys
        560                 565                 570

tcc tca gag agg act cct ttg ccc ctg tgt tcc tcc cag tcc cag atg     1777
Ser Ser Glu Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ser Gln Met
    575                 580                 585

gac tac cga aga ttg cag cct tct tgc ctg ggg acc atg ccc ctg tct     1825
Asp Tyr Arg Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser
590                 595                 600                 605

gtg tgc cca ccc atg gct gag tca ggg tcc tgc tgt acc acc cac att     1873
Val Cys Pro Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile
                610                 615                 620

gcc aac cat tcc tac cta cca cta agc tat tgg cag cag cct tga         1918
Ala Asn His Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
            625                 630                 635

gtcgac                                                             1924
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<210> 165
<211> 635
<212> PRT
<213> Macaca fascicularis

<400> 165

Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu Leu Leu Ala
1 5 10 15

Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser Leu Leu Ala
20 25 30

Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe Glu Asp Leu
35 40 45

Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly Thr Tyr Gln
50 55 60

Leu Leu Tyr Ala Tyr Pro Gly Glu Lys Pro Arg Ala Cys Pro Leu Ser
65 70 75 80

Ser Gln Ser Val Pro Arg Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro
85 90 95

Ala Gln Glu Glu Val Arg Leu Phe Ser Pro Leu His Leu Trp Val Lys
100 105 110

Asn Val Phe Leu Asn Gln Thr Gln Ile Gln Arg Val Leu Phe Val Asp
115 120 125

Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly
130 135 140

Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Ala Pro Ala Pro Glu
145 150 155 160

Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Lys Asp Leu
165 170 175

Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr
180 185 190

```
Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
        195                 200                 205

Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln
    210                 215                 220

Thr Ser Pro Thr Arg Glu Ala Ser Ala Leu Thr Ala Val Gly Gly Ser
225                 230                 235                 240

Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu
                245                 250                 255

Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp
            260                 265                 270

Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Ile Gly
        275                 280                 285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln
    290                 295                 300

Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala
305                 310                 315                 320

Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asp Cys Glu Glu
                325                 330                 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys
            340                 345                 350

His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu Val Glu Val
        355                 360                 365

Thr Thr Ala Leu Gly Ala Val His Ser Tyr Leu Gly Ser Pro Phe Trp
    370                 375                 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu
385                 390                 395                 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
                405                 410                 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
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            420                 425                 430

Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr
        435                 440                 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg
    450                 455                 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro
465                 470                 475                 480

Ala Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr
                485                 490                 495

Ala Leu Leu Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu
            500                 505                 510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu
        515                 520                 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg
    530                 535                 540

Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys
545                 550                 555                 560

Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu
                565                 570                 575

Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ser Gln Met Asp Tyr Arg
            580                 585                 590

Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro
        595                 600                 605

Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His
    610                 615                 620

Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
625                 630                 635
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<211> 24
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<220>
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<400> 166
caggggccag tggatagact gatg 24

<210> 167
<211> 23
<212> DNA
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<220>
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<400> 167
gctcactgga tggtgggaag atg 23

<210> 168
<211> 30
<212> DNA
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<220>
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<400> 168
tagaattcca ccatggaatg gcctttgatc 30

<210> 169
<211> 56
<212> DNA
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<223> an artificially synthesized primer sequence

<400> 169
agcctgagtc atcacaatat ccgatccgcc tccacctgca gagacagtga ccagag 56

<210> 170
<211> 56
<212> DNA
<213> Artificial

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actctggtca ctgtctctgc aggtggaggc ggatcggata ttgtgatgac tcaggc 56

<210> 171
<211> 60
<212> DNA
<213> Artificial

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<400> 171
attgcggccg cttatcactt atcgtcgtca tccttgtagt cttttatttc cagcttggtc 60

<210> 172
<211> 8
<212> PRT
<213> Artificial

<220>
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<400> 172

Asp Tyr Lys Asp Asp Asp Asp Lys
1 5

<210> 173
<211> 85
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 173
tagaattcca ccatggaatg gcctttgatc tttctcttcc tcctgtcagg aactgcaggt 60

gtccactccc aggttcagct gcagc 85

<210> 174
<211> 82
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 174
tggtcactgt ctctgcaggt ggtggtggtt cgggtggtgg tggttcgggt ggtggcggat 60

cggatattgt gatgactcag gc 82

<210> 175

<211> 82
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 175
tgagtcatca caatatccga tccgccacca cccgaaccac caccacccga accaccacca 60

cctgcagaga cagtgaccag ag 82

<210> 176
<211> 25
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 176
caggttcagc tgcagcagtc tggac 25

<210> 177
<211> 81
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 177
gctgcagctg aacctgcgat ccaccgcctc ccgaaccacc accacccgat ccaccacctc 60

cttttatttc agcttggtc c 81

<210> 178
<211> 38
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 178
gcccagccgg ccatggcgga kgtrmagctt caggagtc 38

<210> 179
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<220>

<223> an artificially synthesized primer sequence

<400> 179
gcccagccgg ccatggcgga ggtbcagctb cagcagtc 38

<210> 180
<211> 38
<212> DNA
<213> Artificial

<220>
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<400> 180
gcccagccgg ccatggcgca ggtgcagctg aagsastc 38

<210> 181
<211> 38
<212> DNA
<213> Artificial

<220>
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<400> 181
gcccagccgg ccatggcgga ggtccarctg caacartc 38

<210> 182
<211> 38
<212> DNA
<213> Artificial

<220>
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<400> 182
gcccagccgg ccatggcgca ggtycagctb cagcartc 38

<210> 183
<211> 38
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 183
gcccagccgg ccatggcgca ggtycarctg cagcagtc 38

<210> 184
<211> 38
<212> DNA

<213> Artificial

<220>
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<400> 184
gcccagccgg ccatggcgca ggtccacgtg aagcagtc 38

<210> 185
<211> 38
<212> DNA
<213> Artificial

<220>
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<400> 185
gcccagccgg ccatggcgga ggtgaasstg gtggaatc 38

<210> 186
<211> 38
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<213> Artificial

<220>
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gcccagccgg ccatggcgga vgtgawgytg gtggagtc 38

<210> 187
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<220>
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<400> 187
gcccagccgg ccatggcgga ggtgcagskg gtggagtc 38

<210> 188
<211> 38
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<220>
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<400> 188
gcccagccgg ccatggcgga kgtgcamctg gtggagtc 38

<210> 189
<211> 38
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<220>
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<400> 189
gcccagccgg ccatggcgga ggtgaagctg atggartc 38

<210> 190
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<213> Artificial

<220>
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<400> 190
gcccagccgg ccatggcgga ggtgcarctt gttgagtc 38

<210> 191
<211> 38
<212> DNA
<213> Artificial

<220>
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<400> 191
gcccagccgg ccatggcgga rgtraagctt ctcgagtc 38

<210> 192
<211> 38
<212> DNA
<213> Artificial

<220>
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gcccagccgg ccatggcgga agtgaarstt gaggagtc 38

<210> 193
<211> 40
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 193

gcccagccgg ccatggcgca ggttactctr aaagwgtstg 40

<210> 194
<211> 38
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 194
gcccagccgg ccatggcgca ggtccaactv cagcarcc 38

<210> 195
<211> 38
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 195
gcccagccgg ccatggcgga tgtgaacttg gaagtgtc 38

<210> 196
<211> 38
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 196
gcccagccgg ccatggcgga ggtgaaggtc atcgagtc 38

<210> 197
<211> 36
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 197
ggagccgccg ccgcccgagg aaacggtgac cgtggt 36

<210> 198
<211> 36
<212> DNA
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<220>

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<400> 198
ggagccgccg ccgcccgagg agactgtgag agtggt 36

<210> 199
<211> 36
<212> DNA
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<220>
<223> an artificially synthesized primer sequence

<400> 199
ggagccgccg ccgcccgcag agacagtgac cagagt 36

<210> 200
<211> 36
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 200
ggagccgccg ccgcccgagg agacggtgac tgaggt 36

<210> 201
<211> 35
<212> DNA
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<220>
<223> an artificially synthesized primer sequence

<400> 201
ggcggcggcg gctccgayat ccagctgact cagcc 35

<210> 202
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 202
ggcggcggcg gctccgayat tgttctcwcc cagtc 35

<210> 203
<211> 35
<212> DNA

<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 203
ggcggcggcg gctccgayat tgtgmtmact cagtc 35

<210> 204
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 204
ggcggcggcg gctccgayat tgtgytraca cagtc 35

<210> 205
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 205
ggcggcggcg gctccgayat tgtratgacm cagtc 35

<210> 206
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 206
ggcggcggcg gctccgayat tmagatramc cagtc 35

<210> 207
<211> 35
<212> DNA
<213> Artificial

<220>
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<400> 207
ggcggcggcg gctccgayat tcagatgayd cagtc 35

<210> 208
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 208
ggcggcggcg gctccgayat ycagatgaca cagac 35

<210> 209
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 209
ggcggcggcg gctccgayat tgttctcawc cagtc 35

<210> 210
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 210
ggcggcggcg gctccgayat tgwgctsacc caatc 35

<210> 211
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 211
ggcggcggcg gctccgayat tstratgacc cartc 35

<210> 212
<211> 35
<212> DNA
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<220>
<223> an artificially synthesized primer sequence

<400> 212

ggcggcggcg gctccgayrt tktgatgacc carac 35

<210> 213
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 213
ggcggcggcg gctccgayat tgtgatgacb cagkc 35

<210> 214
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 214
ggcggcggcg gctccgayat tgtgataacy cagga 35

<210> 215
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 215
ggcggcggcg gctccgayat tgtgatgacc cagwt 35

<210> 216
<211> 35
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 216
ggcggcggcg gctccgayat tgtgatgaca caacc 35

<210> 217
<211> 35
<212> DNA
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<220>

<223> an artificially synthesized primer sequence

<400> 217
ggcggcggcg gctccgayat tttgctgact cagtc 35

<210> 218
<211> 38
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<220>
<223> an artificially synthesized primer sequence

<400> 218
ggcggcggcg gctccgatgc tgttgtgact caggaatc 38

<210> 219
<211> 36
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 219
ggaattcggc ccccgaggcc ttgatttcca gcttgg 36

<210> 220
<211> 36
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 220
ggaattcggc ccccgaggcc tttatttcca gcttgg 36

<210> 221
<211> 36
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 221
ggaattcggc ccccgaggcc tttatttcca actttg 36

<210> 222
<211> 36
<212> DNA

<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 222
ggaattcggc ccccgaggcc ttcagctcca gcttgg 36

<210> 223
<211> 39
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized primer sequence

<400> 223
ggaattcggc ccccgaggcc cctaggacag tcagtttgg 39

<210> 224
<211> 27
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence

<400> 224
ttactcgcgg cccagccggc catggcg 27

<210> 225
<211> 17
<212> DNA
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<220>
<223> an artificially synthesized sequence

<400> 225
ggaattcggc ccccgag 17

<210> 226
<211> 20
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence

<400> 226
tcacttacag gctctctact 20

<210> 227
<211> 20
<212> DNA
<213> Artificial

<220>
<223> an artificially synthesized sequence

<400> 227
caggtggggt ctttcattcc 20

<210> 228
<211> 354
<212> DNA
<213> Homo sapiens

<400> 228
caggtgcagc tggtgcagtc tggacctgag gtgaagaagc ctggggcctc agtgaaggtc 60

tcctgcaagg cttctggata caccttcacc aactcctgga tgaactgggt gaggcagagg 120

cctggaaagg gtcttgagtg gatgggacgg atttatcctg gagatggaga aactatctac 180

aatgggaaat tcagggtcag agtcacgatt accgcggacg aatccacgag cacagcctac 240

atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaggctat 300

gatgattact cgtttgctta ctggggccag ggaaccacgg tcaccgtctc ttca 354

<210> 229
<211> 118
<212> PRT
<213> Homo sapiens

<400> 229

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Ser
20 25 30

Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Met
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe
50 55 60

Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser
115

<210> 230
<211> 30
<212> PRT
<213> Homo sapiens

<400> 230

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
20 25 30

<210> 231
<211> 5
<212> PRT
<213> Homo sapiens

<400> 231

Asn Ser Trp Met Asn
1 5

<210> 232
<211> 14
<212> PRT
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<400> 232

Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Met Gly
1 5 10

<210> 233
<211> 17
<212> PRT
<213> Homo sapiens

<400> 233

Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe Arg
1 5 10 15

Val

<210> 234
<211> 32
<212> PRT
<213> Homo sapiens

<400> 234

Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr Met Glu
1 5 10 15

Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
20 25 30

<210> 235
<211> 9
<212> PRT
<213> Homo sapiens

<400> 235

Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr
1 5

<210> 236
<211> 11
<212> PRT
<213> Homo sapiens

<400> 236

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
1 5 10

<210> 237
<211> 336
<212> DNA
<213> Homo sapiens

<400> 237
gatattgtga tgactcagtc tgcactctcc ctgcccgtca cccctggaga gccggcctcc 60

atctcctgca ggtctagtaa gagtctcctg catagtaatg gcaacactta cttgtattgg 120

ttccagcaga agccagggca gtctccacag ctcctgatct atcggatgtc caaccttgcc 180

tcaggggtcc ctgacaggtt cagtggcagt ggatcaggca cagcttttac actgaaaatc 240

agcagagtgg aggctgagga tgttggggtt tattactgca tgcaacatat agaatatcct 300

tttacgttcg gccaagggac caaactggaa atcaaa 336

<210> 238
<211> 112
<212> PRT
<213> Homo sapiens

<400> 238

Asp Ile Val Met Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Gln Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Ile Glu Tyr Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 239
<211> 23
<212> PRT
<213> Homo sapiens

<400> 239

Asp Ile Val Met Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys
20

<210> 240
<211> 16
<212> PRT
<213> Homo sapiens

<400> 240

Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr
1 5 10 15

<210> 241
<211> 15
<212> PRT
<213> Homo sapiens

<400> 241

Trp Phe Gln Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr
1 5 10 15

<210> 242
<211> 7
<212> PRT
<213> Homo sapiens

<400> 242

Arg Met Ser Asn Leu Ala Ser
1 5

<210> 243
<211> 32
<212> PRT
<213> Homo sapiens

<400> 243

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
1 5 10 15

Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
20 25 30

<210> 244
<211> 9
<212> PRT
<213> Homo sapiens

<400> 244

Met Gln His Ile Glu Tyr Pro Phe Thr
1 5

<210> 245
<211> 10
<212> PRT
<213> Homo sapiens

<400> 245

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
1 5 10

<210> 246
<211> 1924
<212> DNA
<213> Homo sapiens

<400> 246
gaattccacc atgccctcct gggccctctt catggtcacc tcctgcctcc tcctggcccc 60

tcaaaacctg gcccaagtca gcagccaaga tgtctccttg ctggcatcag actcagagcc 120

cctgaagtgt ttctcccgaa catttgagga cctcacttgc ttctgggatg aggaagaggc 180

agcgcccagt gggacatacc agctgctgta tgcctacccg cgggagaagc cccgtgcttg 240

ccccctgagt tcccagagca tgccccactt tggaacccga tacgtgtgcc agtttccaga 300

ccaggaggaa gtgcgtctct tctttccgct gcacctctgg gtgaagaatg tgttcctaaa 360

ccagactcgg actcagcgag tcctctttgt ggacagtgta ggcctgccgg ctccccccag 420

tatcatcaag gccatgggtg ggagccagcc aggggaactt cagatcagct gggaggagcc 480

agctccagaa atcagtgatt tcctgaggta cgaactccgc tatggcccca gagatcccaa 540

gaactccact ggtcccacgg tcatacagct gattgccaca gaaacctgct gccctgctct 600

gcagagacct cactcagcct ctgctctgga ccagtctcca tgtgctcagc ccacaatgcc 660

ctggcaagat ggaccaaagc agacctcccc aagtagagaa gcttcagctc tgacagcaga 720

gggtggaagc tgcctcatct caggactcca gcctggcaac tcctactggc tgcagctgcg 780

cagcgaacct gatgggatct ccctcggtgg ctcctgggga tcctggtccc tccctgtgac 840

tgtggacctg cctggagatg cagtggcact tggactgcaa tgctttacct tggacctgaa 900

gaatgttacc tgtcaatggc agcaacagga ccatgctagc tcccaaggct tcttctacca 960

cagcagggca cggtgctgcc ccagagacag gtaccccatc tgggagaact gcgaagagga 1020

agagaaaaca aatccaggac tacagacccc acagttctct cgctgccact tcaagtcacg 1080

aaatgacagc attattcaca tccttgtgga ggtgaccaca gccccgggta ctgttcacag 1140

```
ctacctgggc tccccttttct ggatccacca ggctgtgcgc ctccccaccc caaacttgca   1200

ctggagggag atctccagtg ggcatctgga attggagtgg cagcacccat cgtcctgggc   1260

agcccaagag acctgttatc aactccgata cacaggagaa ggccatcagg actggaaggt   1320

gctggagccg cctctcgggg cccgaggagg gaccctggag ctgcgcccgc gatctcgcta   1380

ccgtttacag ctgcgcgcca ggctcaacgg ccccacctac caaggtccct ggagctcgtg   1440

gtcggaccca actagggtgg agaccgccac cgagaccgcc tggatctcct tggtgaccgc   1500

tctgcatcta gtgctgggcc tcagcgccgt cctgggcctg ctgctgctga ggtggcagtt   1560

tcctgcacac tacaggagac tgaggcatgc cctgtggccc tcacttccag acctgcaccg   1620

ggtcctaggc cagtacctta gggacactgc agccctgagc ccgcccaagg ccacagtctc   1680

agatacctgt gaagaagtgg aacccagcct ccttgaaatc ctccccaagt cctcagagag   1740

gactcctttg cccctgtgtt cctcccaggc ccagatggac taccgaagat tgcagccttc   1800

ttgcctgggg accatgcccc tgtctgtgtg cccacccatg gctgagtcag ggtcctgctg   1860

taccacccac attgccaacc attcctacct accactaagc tattggcagc agccttgagt   1920

cgac                                                               1924
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<210> 247
<211> 1924
<212> DNA
<213> Homo sapiens

<220>
<221> CDS
<222> (11)..(1918)

<400> 247

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gaattccacc atg ccc tcc tgg gcc ctc ttc atg gtc acc tcc tgc ctc        49
           Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu
           1               5                   10

ctc ctg gcc cct caa aac ctg gcc caa gtc agc agc caa gat gtc tcc        97
Leu Leu Ala Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser
    15                  20                  25

ttg ctg gca tca gac tca gag ccc ctg aag tgt ttc tcc cga aca ttt       145
Leu Leu Ala Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe
30                  35                  40                  45

gag gac ctc act tgc ttc tgg gat gag gaa gag gca gcg ccc agt ggg       193
Glu Asp Leu Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly
                50                  55                  60

aca tac cag ctg ctg tat gcc tac ccg cgg gag aag ccc cgt gct tgc       241
Thr Tyr Gln Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys
```

```
            65                  70                  75

ccc ctg agt tcc cag agc atg ccc cac ttt gga acc cga tac gtg tgc      289
Pro Leu Ser Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys
        80                  85                  90

cag ttt cca gac cag gag gaa gtg cct ctc ttc ttt ccg ctg cac ctc      337
Gln Phe Pro Asp Gln Glu Glu Val Pro Leu Phe Phe Pro Leu His Leu
    95                  100                 105

tgg gtg aag aat gtg ttc cta aac cag act cgg act cag cga gtc ctc      385
Trp Val Lys Asn Val Phe Leu Asn Gln Thr Arg Thr Gln Arg Val Leu
110                 115                 120                 125

ttt gtg gac agt gta ggc ctg ccg gct ccc ccc agt atc atc aag gcc      433
Phe Val Asp Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala
                130                 135                 140

atg ggt ggg agc cag cca ggg gaa ctt cag atc agc tgg gag gag cca      481
Met Gly Gly Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Glu Pro
            145                 150                 155

gct cca gaa atc agt gat ttc ctg agg tac gaa ctc cgc tat ggc ccc      529
Ala Pro Glu Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro
        160                 165                 170

aga gat ccc aag aac tcc act ggt ccc acg gtc ata cag ctg att gcc      577
Arg Asp Pro Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala
    175                 180                 185

aca gaa acc tgc tgc cct gct ctg cag aga cct cac tca gcc tct gct      625
Thr Glu Thr Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala
190                 195                 200                 205

ctg gac cag tct cca tgt gct cag ccc aca atg ccc tgg caa gat gga      673
Leu Asp Gln Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly
                210                 215                 220

cca aag cag acc tcc cca agt aga gaa gct tca gct ctg aca gca gag      721
Pro Lys Gln Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu
            225                 230                 235

ggt gga agc tgc ctc atc tca gga ctc cag cct ggc aac tcc tac tgg      769
Gly Gly Ser Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp
        240                 245                 250

ctg cag ctg cgc agc gaa cct gat ggg atc tcc ctc ggt ggc tcc tgg      817
Leu Gln Leu Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp
    255                 260                 265

gga tcc tgg tcc ctc cct gtg act gtg gac ctg cct gga gat gca gtg      865
Gly Ser Trp Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val
270                 275                 280                 285

gca ctt gga ctg caa tgc ttt acc ttg gac ctg aag aat gtt acc tgt      913
Ala Leu Gly Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys
                290                 295                 300
```

```
caa tgg cag caa cag gac cat gct agc tcc caa ggc ttc ttc tac cac      961
Gln Trp Gln Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His
            305                 310                 315

agc agg gca cgg tgc tgc ccc aga gac agg tac ccc atc tgg gag aac     1009
Ser Arg Ala Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn
        320                 325                 330

tgc gaa gag gaa gag aaa aca aat cca gga cta cag acc cca cag ttc     1057
Cys Glu Glu Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe
    335                 340                 345

tct cgc tgc cac ttc aag tca cga aat gac agc att att cac atc ctt     1105
Ser Arg Cys His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu
350                 355                 360                 365

gtg gag gtg acc aca gcc ccg ggt act gtt cac agc tac ctg ggc tcc     1153
Val Glu Val Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser
                370                 375                 380

cct ttc tgg atc cac cag gct gtg cgc ctc ccc acc cca aac ttg cac     1201
Pro Phe Trp Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His
            385                 390                 395

tgg agg gag atc tcc agt ggg cat ctg gaa ttg gag tgg cag cac cca     1249
Trp Arg Glu Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro
        400                 405                 410

tcg tcc tgg gca gcc caa gag acc tgt tat caa ctc cga tac aca gga     1297
Ser Ser Trp Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly
    415                 420                 425

gaa ggc cat cag gac tgg aag gtg ctg gag ccg cct ctc ggg gcc cga     1345
Glu Gly His Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg
430                 435                 440                 445

gga ggg acc ctg gag ctg cgc ccg cga tct cgc tac cgt tta cag ctg     1393
Gly Gly Thr Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu
                450                 455                 460

cgc gcc agg ctc aac ggc ccc acc tac caa ggt ccc tgg agc tcg tgg     1441
Arg Ala Arg Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp
            465                 470                 475

tcg gac cca act agg gtg gag acc gcc acc gag acc gcc tgg atc tcc     1489
Ser Asp Pro Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser
        480                 485                 490

ttg gtg acc gct ctg cat cta gtg ctg ggc ctc agc gcc gtc ctg ggc     1537
Leu Val Thr Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly
    495                 500                 505

ctg ctg ctg ctg agg tgg cag ttt cct gca cac tac agg aga ctg agg     1585
Leu Leu Leu Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg
510                 515                 520                 525
```

```
cat gcc ctg tgg ccc tca ctt cca gac ctg cac cgg gtc cta ggc cag     1633
His Ala Leu Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln
                530                 535                 540

tac ctt agg gac act gca gcc ctg agc ccg ccc aag gcc aca gtc tca     1681
Tyr Leu Arg Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser
            545                 550                 555

gat acc tgt gaa gaa gtg gaa ccc agc ctc ctt gaa atc ctc ccc aag     1729
Asp Thr Cys Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys
        560                 565                 570

tcc tca gag agg act cct ttg ccc ctg tgt tcc tcc cag gcc cag atg     1777
Ser Ser Glu Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ala Gln Met
    575                 580                 585

gac tac cga aga ttg cag cct tct tgc ctg ggg acc atg ccc ctg tct     1825
Asp Tyr Arg Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser
590                 595                 600                 605

gtg tgc cca ccc atg gct gag tca ggg tcc tgc tgt acc acc cac att     1873
Val Cys Pro Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile
                610                 615                 620

gcc aac cat tcc tac cta cca cta agc tat tgg cag cag cct tga         1918
Ala Asn His Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
            625                 630                 635

gtcgac                                                             1924
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<210> 248
<211> 635
<212> PRT
<213> Homo sapiens

<400> 248

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Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu Leu Leu Ala
1               5                   10                  15

Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser Leu Leu Ala
            20                  25                  30

Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe Glu Asp Leu
        35                  40                  45

Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly Thr Tyr Gln
    50                  55                  60

Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys Pro Leu Ser
65                  70                  75                  80
```

```
Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro
                85                  90                  95

Asp Gln Glu Glu Val Pro Leu Phe Phe Pro Leu His Leu Trp Val Lys
            100                 105                 110

Asn Val Phe Leu Asn Gln Thr Arg Thr Gln Arg Val Leu Phe Val Asp
        115                 120                 125

Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly
    130                 135                 140

Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Glu Pro Ala Pro Glu
145                 150                 155                 160

Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Arg Asp Pro
                165                 170                 175

Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr
            180                 185                 190

Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
        195                 200                 205

Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln
    210                 215                 220

Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu Gly Gly Ser
225                 230                 235                 240

Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu
                245                 250                 255

Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp
            260                 265                 270

Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Leu Gly
        275                 280                 285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln
    290                 295                 300
```

```
Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala
305                 310                 315                 320

Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn Cys Glu Glu
                325                 330                 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys
            340                 345                 350

His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu Val Glu Val
        355                 360                 365

Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser Pro Phe Trp
    370                 375                 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu
385                 390                 395                 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
                405                 410                 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
            420                 425                 430

Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr
        435                 440                 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg
    450                 455                 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro
465                 470                 475                 480

Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr
                485                 490                 495

Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu
            500                 505                 510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu
        515                 520                 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg
```

```
    530                 535                 540

Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys
545                 550                 555                 560

Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu
                565                 570                 575

Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ala Gln Met Asp Tyr Arg
            580                 585                 590

Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro
        595                 600                 605

Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His
    610                 615                 620

Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
625                 630                 635


<210>  249
<211>  1924
<212>  DNA
<213>  Homo sapiens

<220>
<221>  CDS
<222>  (11)..(1918)

<400>  249
gaattccacc atg ccc tcc tgg gcc ctc ttc atg gtc acc tcc tgc ctc        49
           Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu
           1               5                   10

ctc ctg gcc cct caa aac ctg gcc caa gtc agc agc caa gat gtc tcc        97
Leu Leu Ala Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser
    15                  20                  25

ttg ctg gca tca gac tca gag ccc ctg aag tgt ttc tcc cga aca ttt       145
Leu Leu Ala Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe
30                  35                  40                  45

gag gac ctc act tgc ttc tgg gat gag gaa gag gca gcg ccc agt ggg       193
Glu Asp Leu Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly
                50                  55                  60

aca tac cag ctg ctg tat gcc tac ccg cgg gag aag ccc cgt gct tgc       241
Thr Tyr Gln Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys
            65                  70                  75
```

```
ccc ctg agt tcc cag agc atg ccc cac ttt gga acc cga tac gtg tgc      289
Pro Leu Ser Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys
        80                  85                  90

cag ttt cca gac cag gag gaa gtg cgt ctc ttc ttt ccg ctg cac ctc      337
Gln Phe Pro Asp Gln Glu Glu Val Arg Leu Phe Phe Pro Leu His Leu
    95                  100                 105

tgg gtg aag aat gtg ttc cta aac cag act cgg act cag cga gtc ctc      385
Trp Val Lys Asn Val Phe Leu Asn Gln Thr Arg Thr Gln Arg Val Leu
110                 115                 120                 125

ttt gtg gac agt gta ggc ctg ccg gct ccc ccc agt atc atc aag gcc      433
Phe Val Asp Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala
                130                 135                 140

atg ggt ggg agc cag cca ggg gaa ctt cag atc agc tgg gag gag cca      481
Met Gly Gly Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Glu Pro
            145                 150                 155

gct cca gaa atc agt gat ttc ctg agg tac gaa ctc cgc tat ggc ccc      529
Ala Pro Glu Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro
        160                 165                 170

aga gat ccc aag aac tcc act ggt ccc acg gtc ata cag ctg att gcc      577
Arg Asp Pro Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala
    175                 180                 185

aca gaa acc tgc tgc cct gct ctg cag aga cct cac tca gcc tct gct      625
Thr Glu Thr Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala
190                 195                 200                 205

ctg gac cag tct cca tgt gct cag ccc aca atg ccc tgg caa gat gga      673
Leu Asp Gln Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly
                210                 215                 220

cca aag cag acc tcc cca agt aga gaa gct tca gct ctg aca gca gag      721
Pro Lys Gln Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu
            225                 230                 235

ggt gga agc tgc ctc atc tca gga ctc cag cct ggc aac tcc tac tgg      769
Gly Gly Ser Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp
        240                 245                 250

ctg cag ctg tgc agc gaa cct gat ggg atc tcc ctc ggt ggc tcc tgg      817
Leu Gln Leu Cys Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp
    255                 260                 265

gga tcc tgg tcc ctc cct gtg act gtg gac ctg cct gga gat gca gtg      865
Gly Ser Trp Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val
270                 275                 280                 285

gca ctt gga ctg caa tgc ttt acc ttg gac ctg aag aat gtt acc tgt      913
Ala Leu Gly Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys
                290                 295                 300

caa tgg cag caa cag gac cat gct agc tcc caa ggc ttc ttc tac cac      961
```

```
Gln Trp Gln Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His
            305                 310                 315

agc agg gca cgg tgc tgc ccc aga gac agg tac ccc atc tgg gag aac     1009
Ser Arg Ala Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn
        320                 325                 330

tgc gaa gag gaa gag aaa aca aat cca gga cta cag acc cca cag ttc     1057
Cys Glu Glu Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe
    335                 340                 345

tct cgc tgc cac ttc aag tca cga aat gac agc att att cac atc ctt     1105
Ser Arg Cys His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu
350                 355                 360                 365

gtg gag gtg acc aca gcc ccg ggt act gtt cac agc tac ctg ggc tcc     1153
Val Glu Val Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser
                370                 375                 380

cct ttc tgg atc cac cag gct gtg cgc ctc ccc acc cca aac ttg cac     1201
Pro Phe Trp Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His
            385                 390                 395

tgg agg gag atc tcc agt ggg cat ctg gaa ttg gag tgg cag cac cca     1249
Trp Arg Glu Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro
        400                 405                 410

tcg tcc tgg gca gcc caa gag acc tgt tat caa ctc cga tac aca gga     1297
Ser Ser Trp Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly
    415                 420                 425

gaa ggc cat cag gac tgg aag gtg ctg gag ccg cct ctc ggg gcc cga     1345
Glu Gly His Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg
430                 435                 440                 445

gga ggg acc ctg gag ctg cgc ccg cga tct cgc tac cgt tta cag ctg     1393
Gly Gly Thr Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu
                450                 455                 460

cgc gcc agg ctc aac ggc ccc acc tac caa ggt ccc tgg agc tcg tgg     1441
Arg Ala Arg Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp
            465                 470                 475

tcg gac cca act agg gtg gag acc gcc acc gag acc gcc tgg atc tcc     1489
Ser Asp Pro Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser
        480                 485                 490

ttg gtg acc gct ctg cat cta gtg ctg ggc ctc agc gcc gtc ctg ggc     1537
Leu Val Thr Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly
    495                 500                 505

ctg ctg ctg ctg agg tgg cag ttt cct gca cac tac agg aga ctg agg     1585
Leu Leu Leu Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg
510                 515                 520                 525

cat gcc ctg tgg ccc tca ctt cca gac ctg cac cgg gtc cta ggc cag     1633
His Ala Leu Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln
```

```
                530                 535                 540

tac ctt agg gac act gca gcc ctg agc ccg ccc aag gcc aca gtc tca     1681
Tyr Leu Arg Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser
            545                 550                 555

gat acc tgt gaa gaa gtg gaa ccc agc ctc ctt gaa atc ctc ccc aag     1729
Asp Thr Cys Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys
        560                 565                 570

tcc tca gag agg act cct ttg ccc ctg tgt tcc tcc cag gcc cag atg     1777
Ser Ser Glu Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ala Gln Met
    575                 580                 585

gac tac cga aga ttg cag cct tct tgc ctg ggg acc atg ccc ctg tct     1825
Asp Tyr Arg Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser
590                 595                 600                 605

gtg tgc cca ccc atg gct gag tca ggg tcc tgc tgt acc acc cac att     1873
Val Cys Pro Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile
                610                 615                 620

gcc aac cat tcc tac cta cca cta agc tat tgg cag cag cct tga         1918
Ala Asn His Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
            625                 630                 635

gtcgac                                                             1924


<210>  250
<211>  635
<212>  PRT
<213>  Homo sapiens

<400>  250

Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu Leu Leu Ala
1               5                   10                  15

Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser Leu Leu Ala
            20                  25                  30

Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe Glu Asp Leu
        35                  40                  45

Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly Thr Tyr Gln
    50                  55                  60

Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys Pro Leu Ser
65                  70                  75                  80

Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro
```

```
                85                  90                  95

Asp Gln Glu Glu Val Arg Leu Phe Phe Pro Leu His Leu Trp Val Lys
            100                 105                 110

Asn Val Phe Leu Asn Gln Thr Arg Thr Gln Arg Val Leu Phe Val Asp
        115                 120                 125

Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly
    130                 135                 140

Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Glu Pro Ala Pro Glu
145                 150                 155                 160

Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Arg Asp Pro
                165                 170                 175

Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr
            180                 185                 190

Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
        195                 200                 205

Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln
    210                 215                 220

Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu Gly Gly Ser
225                 230                 235                 240

Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu
                245                 250                 255

Cys Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp
            260                 265                 270

Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Leu Gly
        275                 280                 285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln
    290                 295                 300

Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala
305                 310                 315                 320
```

```
Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn Cys Glu Glu
                325                 330                 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys
            340                 345                 350

His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu Val Glu Val
        355                 360                 365

Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser Pro Phe Trp
    370                 375                 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu
385                 390                 395                 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
                405                 410                 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
            420                 425                 430

Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr
        435                 440                 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg
    450                 455                 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro
465                 470                 475                 480

Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr
                485                 490                 495

Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu
            500                 505                 510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu
        515                 520                 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg
    530                 535                 540
```

```
Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys
545                 550                 555                 560

Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu
                565                 570                 575

Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ala Gln Met Asp Tyr Arg
            580                 585                 590

Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro
        595                 600                 605

Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His
    610                 615                 620

Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
625                 630                 635


<210>  251
<211>  1924
<212>  DNA
<213>  Homo sapiens

<220>
<221>  CDS
<222>  (11)..(1918)

<400>  251
gaattccacc atg ccc tcc tgg gcc ctc ttc atg gtc acc tcc tgc ctc        49
           Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu
           1               5                   10

ctc ctg gcc cct caa aac ctg gcc caa gtc agc agc caa gat gtc tcc        97
Leu Leu Ala Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser
    15                  20                  25

ttg ctg gca tca gac tca gag ccc ctg aag tgt ttc tcc cga aca ttt       145
Leu Leu Ala Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe
30                  35                  40                  45

gag gac ctc act tgc ttc tgg gat gag gaa gag gca gcg ccc agt ggg       193
Glu Asp Leu Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly
                50                  55                  60

aca tac cag ctg ctg tat gcc tac ccg cgg gag aag ccc cgt gct tgc       241
Thr Tyr Gln Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys
            65                  70                  75

ccc ctg agt tcc cag agc atg ccc cac ttt gga acc cga tac gtg tgc       289
Pro Leu Ser Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys
```

```
        80                  85                  90

cag ttt cca gac cag gag gaa gtg cgt ctc ttc ttt ccg ctg cac ctc      337
Gln Phe Pro Asp Gln Glu Glu Val Arg Leu Phe Phe Pro Leu His Leu
    95                  100                 105

tgg gtg aag aat gtg ttc cta aac cag act cgg act cag cga gtc ctc      385
Trp Val Lys Asn Val Phe Leu Asn Gln Thr Arg Thr Gln Arg Val Leu
110                 115                 120                 125

ttt gtg gac agt gta ggc ctg ccg gct ccc ccc agt atc atc aag gcc      433
Phe Val Asp Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala
                130                 135                 140

atg ggt ggg agc cag cca ggg gaa ctt cag atc agc tgg gag gag cca      481
Met Gly Gly Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Glu Pro
            145                 150                 155

gct cca gaa atc agt gat ttc ctg agg tac gaa ctc cgc tat ggc ccc      529
Ala Pro Glu Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro
        160                 165                 170

aga gat ccc aag aac tcc act ggt ccc acg gtc ata cag ctg att gcc      577
Arg Asp Pro Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala
    175                 180                 185

aca gaa acc tgc tgc cct gct ctg cag aga cct cac tca gcc tct gct      625
Thr Glu Thr Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala
190                 195                 200                 205

ctg gac cag tct cca tgt gct cag ccc aca atg ccc tgg caa gat gga      673
Leu Asp Gln Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly
                210                 215                 220

cca aag cag acc tcc cca agt aga gaa gct tca gct ctg aca gca gag      721
Pro Lys Gln Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu
            225                 230                 235

ggt gga agc tgc ctc atc tca gga ctc cag cct ggc aac tcc tac tgg      769
Gly Gly Ser Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp
        240                 245                 250

ctg cag ctg cgc agc gaa cct gat ggg atc tcc ctc ggt ggc tcc tgg      817
Leu Gln Leu Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp
    255                 260                 265

gga tcc tgg tcc ctc act gtg act gtg gac ctg cct gga gat gca gtg      865
Gly Ser Trp Ser Leu Thr Val Thr Val Asp Leu Pro Gly Asp Ala Val
270                 275                 280                 285

gca ctt gga ctg caa tgc ttt acc ttg gac ctg aag aat gtt acc tgt      913
Ala Leu Gly Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys
                290                 295                 300

caa tgg cag caa cag gac cat gct agc tcc caa ggc ttc ttc tac cac      961
Gln Trp Gln Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His
            305                 310                 315
```

```
agc agg gca cgg tgc tgc ccc aga gac agg tac ccc atc tgg gag aac     1009
Ser Arg Ala Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn
        320                 325                 330

tgc gaa gag gaa gag aaa aca aat cca gga cta cag acc cca cag ttc     1057
Cys Glu Glu Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe
    335                 340                 345

tct cgc tgc cac ttc aag tca cga aat gac agc att att cac atc ctt     1105
Ser Arg Cys His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu
350                 355                 360                 365

gtg gag gtg acc aca gcc ccg ggt act gtt cac agc tac ctg ggc tcc     1153
Val Glu Val Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser
                370                 375                 380

cct ttc tgg atc cac cag gct gtg cgc ctc ccc acc cca aac ttg cac     1201
Pro Phe Trp Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His
            385                 390                 395

tgg agg gag atc tcc agt ggg cat ctg gaa ttg gag tgg cag cac cca     1249
Trp Arg Glu Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro
        400                 405                 410

tcg tcc tgg gca gcc caa gag acc tgt tat caa ctc cga tac aca gga     1297
Ser Ser Trp Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly
    415                 420                 425

gaa ggc cat cag gac tgg aag gtg ctg gag ccg cct ctc ggg gcc cga     1345
Glu Gly His Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg
430                 435                 440                 445

gga ggg acc ctg gag ctg cgc ccg cga tct cgc tac cgt tta cag ctg     1393
Gly Gly Thr Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu
                450                 455                 460

cgc gcc agg ctc aac ggc ccc acc tac caa ggt ccc tgg agc tcg tgg     1441
Arg Ala Arg Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp
            465                 470                 475

tcg gac cca act agg gtg gag acc gcc acc gag acc gcc tgg atc tcc     1489
Ser Asp Pro Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser
        480                 485                 490

ttg gtg acc gct ctg cat cta gtg ctg ggc ctc agc gcc gtc ctg ggc     1537
Leu Val Thr Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly
    495                 500                 505

ctg ctg ctg ctg agg tgg cag ttt cct gca cac tac agg aga ctg agg     1585
Leu Leu Leu Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg
510                 515                 520                 525

cat gcc ctg tgg ccc tca ctt cca gac ctg cac cgg gtc cta ggc cag     1633
His Ala Leu Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln
                530                 535                 540
```

```
tac ctt agg gac act gca gcc ctg agc ccg ccc aag gcc aca gtc tca     1681
Tyr Leu Arg Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser
            545                 550                 555

gat acc tgt gaa gaa gtg gaa ccc agc ctc ctt gaa atc ctc ccc aag     1729
Asp Thr Cys Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys
        560                 565                 570

tcc tca gag agg act cct ttg ccc ctg tgt tcc tcc cag gcc cag atg     1777
Ser Ser Glu Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ala Gln Met
    575                 580                 585

gac tac cga aga ttg cag cct tct tgc ctg ggg acc atg ccc ctg tct     1825
Asp Tyr Arg Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser
590                 595                 600                 605

gtg tgc cca ccc atg gct gag tca ggg tcc tgc tgt acc acc cac att     1873
Val Cys Pro Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile
                610                 615                 620

gcc aac cat tcc tac cta cca cta agc tat tgg cag cag cct tga         1918
Ala Asn His Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
            625                 630                 635

gtcgac                                                             1924
```

<210> 252
<211> 635
<212> PRT
<213> Homo sapiens

<400> 252

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Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu Leu Leu Ala
1               5                   10                  15

Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser Leu Leu Ala
            20                  25                  30

Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe Glu Asp Leu
        35                  40                  45

Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly Thr Tyr Gln
    50                  55                  60

Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys Pro Leu Ser
65                  70                  75                  80

Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro
                85                  90                  95
```

```
Asp Gln Glu Glu Val Arg Leu Phe Phe Pro Leu His Leu Trp Val Lys
            100                 105                 110

Asn Val Phe Leu Asn Gln Thr Arg Thr Gln Arg Val Leu Phe Val Asp
        115                 120                 125

Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly
    130                 135                 140

Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Glu Pro Ala Pro Glu
145                 150                 155                 160

Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Arg Asp Pro
                165                 170                 175

Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr
            180                 185                 190

Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
        195                 200                 205

Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln
    210                 215                 220

Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu Gly Gly Ser
225                 230                 235                 240

Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu
                245                 250                 255

Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp
            260                 265                 270

Ser Leu Thr Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Leu Gly
        275                 280                 285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln
    290                 295                 300

Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala
305                 310                 315                 320
```

```
Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn Cys Glu Glu
                325                 330                 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys
            340                 345                 350

His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu Val Glu Val
        355                 360                 365

Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser Pro Phe Trp
    370                 375                 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu
385                 390                 395                 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
                405                 410                 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
            420                 425                 430

Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr
        435                 440                 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg
    450                 455                 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro
465                 470                 475                 480

Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr
                485                 490                 495

Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu
            500                 505                 510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu
        515                 520                 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg
    530                 535                 540

Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys
```

545 550 555 560

Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu
565 570 575

Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ala Gln Met Asp Tyr Arg
580 585 590

Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro
595 600 605

Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His
610 615 620

Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro
625 630 635

<210> 253
<211> 1572
<212> DNA
<213> Homo sapiens

<400> 253
atggactgga cctggaggtt cctctttgtg gtggcagcag ctacaggtgt ccagtcccag 60

gtgcagctgg tgcagtctgg acctgaggtg aagaagcctg gggcctcagt gaaggtctcc 120

tgcaaggctt ctggatacac cttcaccaac tcctggatga actgggtgag gcagaggcct 180

ggaaagggtc ttgagtgggt tggacggatt tatcctggag atggagaaac tatctacaat 240

gggaaattca gggtcagagt cacgattacc gcggacgaat ccacgagcac agcctacatg 300

gagctgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgag aggctatgat 360

gattactcgt ttgcttactg gggccaggga accacggtca ccgtctcttc aggtggtggt 420

ggatccggag gtggtggatc gggtggtgga ggatcggata ttgtgatgac tcagtctgca 480

ctctccctgc ccgtcacccc tggagagccg gcctccatct cctgcaggtc tagtaagagt 540

ctcctgcata gtaatggcaa cacttacttg tattggtacc tgcagaagcc agggcagtct 600

ccacagctcc tgatctatcg gatgtccaac cttgcctcag gggtccctga caggttcagt 660

ggcagtggat caggcacagc ttttacactg aaaatcagca gagtggaggc tgaggatgtt 720

ggggtttatt actgcatgca acatatagaa tatcctttta cgttcggcca agggaccaaa 780

ctggaaatca aaggaggtgg tggatcgggt ggtggtggtt cgggaggcgg tggatcgcag 840

gtgcagctgg tgcagtctgg acctgaggtg aagaagcctg gggcctcagt gaaggtctcc 900

tgcaaggctt ctggatacac cttcaccaac tcctggatga actgggtgag gcagaggcct 960

ggaaagggtc ttgagtgggt tggacggatt tatcctggag atggagaaac tatctacaat 1020

gggaaattca gggtcagagt cacgattacc gcggacgaat ccacgagcac agcctacatg 1080

gagctgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgag aggctatgat 1140

gattactcgt ttgcttactg gggccaggga accacggtca ccgtctcttc aggtggtggt 1200

ggatccggag gtggtggatc gggtggtgga ggatcggata ttgtgatgac tcagtctgca 1260

ctctccctgc ccgtcacccc tggagagccg gcctccatct cctgcaggtc tagtaagagt 1320

ctcctgcata gtaatggcaa cacttacttg tattggtacc tgcagaagcc agggcagtct 1380

ccacagctcc tgatctatcg gatgtccaac cttgcctcag gggtccctga caggttcagt 1440

ggcagtggat caggcacagc ttttacactg aaaatcagca gagtggaggc tgaggatgtt 1500

ggggtttatt actgcatgca acatatagaa tatcctttta cgttcggcca agggaccaaa 1560

ctggaaatca aa 1572

<210> 254
<211> 524
<212> PRT
<213> Homo sapiens

<400> 254

Met Asp Trp Thr Trp Arg Phe Leu Phe Val Val Ala Ala Ala Thr Gly
1 5 10 15

Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys
20 25 30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu
50 55 60

Glu Trp Val Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn
65 70 75 80

Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser
85 90 95

```
Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
        115                 120                 125

Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Ala
145                 150                 155                 160

Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg
                165                 170                 175

Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp
            180                 185                 190

Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met
        195                 200                 205

Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val
225                 230                 235                 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly
                245                 250                 255

Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
            260                 265                 270

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Pro
        275                 280                 285

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser
    290                 295                 300

Gly Tyr Thr Phe Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro
305                 310                 315                 320
```

```
Gly Lys Gly Leu Glu Trp Val Gly Arg Ile Tyr Pro Gly Asp Gly Glu
                325                 330                 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp
            340                 345                 350

Glu Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu
        355                 360                 365

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe
    370                 375                 380

Ala Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly
385                 390                 395                 400

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
                405                 410                 415

Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser
            420                 425                 430

Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr
        435                 440                 445

Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu
    450                 455                 460

Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser
465                 470                 475                 480

Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu
                485                 490                 495

Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro
            500                 505                 510

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
        515                 520
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<210> 255
<211> 354
<212> DNA
<213> Homo sapiens

<400> 255
caggtgcagc tggtgcagtc tggacctgag gtgaagaagc ctggggcctc agtgaaggtc 60

tcctgcaagg cttctggata caccttcacc aactcctgga tgaactgggt gaggcagagg 120

cctggaaagg gtcttgagtg ggttggacgg atttatcctg gagatggaga aactatctac 180

aatgggaaat tcagggtcag agtcacgatt accgcggacg aatccacgag cacagcctac 240

atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaggctat 300

gatgattact cgtttgctta ctggggccag ggaaccacgg tcaccgtctc ttca 354

<210> 256
<211> 118
<212> PRT
<213> Homo sapiens

<400> 256

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Ser
20 25 30

Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Val
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe
50 55 60

Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser
115

<210> 257
<211> 336
<212> DNA

<213> Homo sapiens

<400> 257
gatattgtga tgactcagtc tgcactctcc ctgcccgtca cccctggaga gccggcctcc 60

atctcctgca ggtctagtaa gagtctcctg catagtaatg gcaacactta cttgtattgg 120

tacctgcaga agccagggca gtctccacag ctcctgatct atcggatgtc caaccttgcc 180

tcaggggtcc ctgacaggtt cagtggcagt ggatcaggca cagcttttac actgaaaatc 240

agcagagtgg aggctgagga tgttggggtt tattactgca tgcaacatat agaatatcct 300

tttacgttcg gccaagggac caaactggaa atcaaa 336

<210> 258
<211> 112
<212> PRT
<213> Homo sapiens

<400> 258

Asp Ile Val Met Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Ser
35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Ile Glu Tyr Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 259
<211> 1572
<212> DNA
<213> Homo sapiens

<400> 259

atggactgga cctggaggtt cctctttgtg gtggcagcag ctacaggtgt ccagtcccag 60

gtgcagctgg tgcagtctgg acctgaggtg aagaagcctg gggcctcagt gaaggtctcc 120

tgcaaggctt ctggatacac cttcaccaac tcctggatga actggatcag gcagaggcct 180

ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat 240

gggaaattca gggtcagagt cacgattacc gcggacgaat ccacgagcac agcctacatg 300

gagctgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgag aggctatgat 360

gattactcgt ttgcttactg gggccaggga accctggtca ccgtctcttc aggtggtggt 420

ggatccggag gtggtggatc gggtggtgga ggatcggata ttgtgatgac tcagtctgca 480

ctctccctgc ccgtcacccc tggagagccg gcctccatct cctgcaggtc tagtaagagt 540

ctcctgcata gtaatggcaa cacttacttg tattggtacc tgcagaagcc agggcagtct 600

ccacagctcc tgatctatcg gatgtccaac cttgcctcag gggtccctga caggttcagt 660

ggcagtggat caggcacagc ttttacactg aaaatcagca gagtggaggc tgaggatgtt 720

ggggtttatt actgcatgca acatatagaa tatcctttta cgttcggcca agggaccaaa 780

ctggaaatca aaggaggtgg tggatcgggt ggtggtggtt cgggaggcgg tggatcgcag 840

gtgcagctgg tgcagtctgg acctgaggtg aagaagcctg gggcctcagt gaaggtctcc 900

tgcaaggctt ctggatacac cttcaccaac tcctggatga actggatcag gcagaggcct 960

ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat 1020

gggaaattca gggtcagagt cacgattacc gcggacgaat ccacgagcac agcctacatg 1080

gagctgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgag aggctatgat 1140

gattactcgt ttgcttactg gggccaggga accctggtca ccgtctcttc aggtggtggt 1200

ggatccggag gtggtggatc gggtggtgga ggatcggata ttgtgatgac tcagtctgca 1260

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ctcctgcata gtaatggcaa cacttacttg tattggtacc tgcagaagcc agggcagtct 1380

ccacagctcc tgatctatcg gatgtccaac cttgcctcag gggtccctga caggttcagt 1440

ggcagtggat caggcacagc ttttacactg aaaatcagca gagtggaggc tgaggatgtt 1500

ggggtttatt actgcatgca acatatagaa tatcctttta cgttcggcca agggaccaaa 1560

ctggaaatca aa 1572

<210> 260

<211> 524
<212> PRT
<213> Homo sapiens

<400> 260

```
Met Asp Trp Thr Trp Arg Phe Leu Phe Val Val Ala Ala Ala Thr Gly
1               5                  10                  15

Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys
            20                  25                  30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
        35                  40                  45

Thr Asn Ser Trp Met Asn Trp Ile Arg Gln Arg Pro Gly Lys Gly Leu
    50                  55                  60

Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn
65                  70                  75                  80

Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser
                85                  90                  95

Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
        115                 120                 125

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Ala
145                 150                 155                 160

Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg
                165                 170                 175

Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp
            180                 185                 190

Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met
        195                 200                 205
```

```
Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val
225                 230                 235                 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly
                245                 250                 255

Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
            260                 265                 270

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Pro
        275                 280                 285

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser
    290                 295                 300

Gly Tyr Thr Phe Thr Asn Ser Trp Met Asn Trp Ile Arg Gln Arg Pro
305                 310                 315                 320

Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu
                325                 330                 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp
            340                 345                 350

Glu Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu
        355                 360                 365

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe
    370                 375                 380

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly
385                 390                 395                 400

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
                405                 410                 415

Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser
            420                 425                 430
```

```
Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr
        435                 440                 445

Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu
    450                 455                 460

Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser
465                 470                 475                 480

Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu
                485                 490                 495

Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro
            500                 505                 510

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
        515                 520
```

<210> 261
<211> 354
<212> DNA
<213> Homo sapiens

<400> 261

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caggtgcagc tggtgcagtc tggacctgag gtgaagaagc ctggggcctc agtgaaggtc     60

tcctgcaagg cttctggata caccttcacc aactcctgga tgaactggat caggcagagg    120

cctggaaagg gtcttgagtg gattggacgg atttatcctg gagatggaga aactatctac    180

aatgggaaat tcagggtcag agtcacgatt accgcggacg aatccacgag cacagcctac    240

atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaggctat    300

gatgattact cgtttgctta ctggggccag ggaaccctgg tcaccgtctc ttca          354
```

<210> 262
<211> 118
<212> PRT
<213> Homo sapiens

<400> 262

```
Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala
1               5                   10                  15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Ser
            20                  25                  30
```

```
Trp Met Asn Trp Ile Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
        35                  40                  45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe
    50                  55                  60

Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65                  70                  75                  80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85                  90                  95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
            100                 105                 110

Leu Val Thr Val Ser Ser
        115
```

<210> 263
<211> 1572
<212> DNA
<213> Mus musculus

<400> 263
atggaatggc ctttgatctt tctcttcctc ctgtcaggaa ctgcaggtgt ccactcccag 60

gttcagctgc agcagtctgg acctgagctg gtgaagcctg gggcctcagt gaagatttcc 120

tgcaaggctt ctggctatgc attcactaac tcctggatga actgggtgaa gcagaggcct 180

ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat 240

gggaaattca gggtcaaggc cacactgact gcagacaaat cctccagcac agcctacatg 300

gatatcagca gcctgacatc tgaggactct gcggtctact tctgtgcaag aggctatgat 360

gattactcgt ttgcttactg gggccaaggg actctggtca ctgtctctgc aggtggtggt 420

ggttcgggtg gtggtggttc gggtggtggc ggatcggata ttgtgatgac tcaggctgca 480

ccctctatac ctgtcactcc tggagagtca gtatccatct cctgtaggtc tagtaagagt 540

ctcctgcata gtaatggcaa cacttacttg tattggttcc tgcagaggcc aggccagtct 600

cctcaactcc tgatatatcg gatgtccaac cttgcctcag gagtcccaga taggttcagt 660

ggcagtgggt caggaactgc tttcacactg agaatcagta gagtggaggc tgaggatgtg 720

ggtgtttatt actgtatgca acatatagaa tatcctttta cgttcggatc ggggaccaag 780

ctggaaataa aaggaggtgg tggatcgggt ggtggtggtt cgggaggcgg tggatcgcag 840

gttcagctgc agcagtctgg acctgagctg gtgaagcctg gggcctcagt gaagatttcc 900

tgcaaggctt ctggctatgc attcactaac tcctggatga actgggtgaa gcagaggcct 960

ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat 1020

gggaaattca gggtcaaggc cacactgact gcagacaaat cctccagcac agcctacatg 1080

gatatcagca gcctgacatc tgaggactct gcggtctact tctgtgcaag aggctatgat 1140

gattactcgt ttgcttactg gggccaaggg actctggtca ctgtctctgc aggtggtggt 1200

ggttcgggtg gtggtggttc gggtggtggc ggatcggata ttgtgatgac tcaggctgca 1260

ccctctatac ctgtcactcc tggagagtca gtatccatct cctgtaggtc tagtaagagt 1320

ctcctgcata gtaatggcaa cacttacttg tattggttcc tgcagaggcc aggccagtct 1380

cctcaactcc tgatatatcg gatgtccaac cttgcctcag gagtcccaga taggttcagt 1440

ggcagtgggt caggaactgc tttcacactg agaatcagta gagtggaggc tgaggatgtg 1500

ggtgtttatt actgtatgca acatatagaa tatcctttta cgttcggatc ggggaccaag 1560

ctggaaataa aa 1572

<210> 264
<211> 524
<212> PRT
<213> Mus musculus

<400> 264

Met Glu Trp Pro Leu Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys
20 25 30

Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe
35 40 45

Thr Asn Ser Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu
50 55 60

Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn
65 70 75 80

Gly Lys Phe Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser

```
                85                  90                  95

Thr Ala Tyr Met Asp Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val
            100                 105                 110

Tyr Phe Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
        115                 120                 125

Gln Gly Thr Leu Val Thr Val Ser Ala Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ala Ala
145                 150                 155                 160

Pro Ser Ile Pro Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg
                165                 170                 175

Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp
            180                 185                 190

Phe Leu Gln Arg Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met
        195                 200                 205

Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Ala Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val
225                 230                 235                 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly
                245                 250                 255

Ser Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
            260                 265                 270

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Pro
        275                 280                 285

Glu Leu Val Lys Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser
    290                 295                 300

Gly Tyr Ala Phe Thr Asn Ser Trp Met Asn Trp Val Lys Gln Arg Pro
305                 310                 315                 320
```

Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu
325 330 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Lys Ala Thr Leu Thr Ala Asp
340 345 350

Lys Ser Ser Ser Thr Ala Tyr Met Asp Ile Ser Ser Leu Thr Ser Glu
355 360 365

Asp Ser Ala Val Tyr Phe Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe
370 375 380

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala Gly Gly Gly
385 390 395 400

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
405 410 415

Thr Gln Ala Ala Pro Ser Ile Pro Val Thr Pro Gly Glu Ser Val Ser
420 425 430

Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr
435 440 445

Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser Pro Gln Leu Leu
450 455 460

Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser
465 470 475 480

Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile Ser Arg Val Glu
485 490 495

Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro
500 505 510

Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
515 520

<210> 265
<211> 30

<212> PRT
<213> Homo sapiens

<400> 265

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
20 25 30

<210> 266
<211> 5
<212> PRT
<213> Homo sapiens

<400> 266

Asn Ser Trp Met Asn
1 5

<210> 267
<211> 14
<212> PRT
<213> Homo sapiens

<400> 267

Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Val Gly
1 5 10

<210> 268
<211> 17
<212> PRT
<213> Homo sapiens

<400> 268

Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe Arg
1 5 10 15

Val

<210> 269
<211> 32
<212> PRT
<213> Homo sapiens

<400> 269

Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr Met Glu
1 5 10 15

Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
20 25 30

<210> 270
<211> 9
<212> PRT
<213> Homo sapiens

<400> 270

Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr
1 5

<210> 271
<211> 11
<212> PRT
<213> Homo sapiens

<400> 271

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
1 5 10

<210> 272
<211> 23
<212> PRT
<213> Homo sapiens

<400> 272

Asp Ile Val Met Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys
20

<210> 273
<211> 16
<212> PRT
<213> Homo sapiens

<400> 273

Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr
1 5 10 15

<210> 274

<211> 15
<212> PRT
<213> Homo sapiens

<400> 274

Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr
1 5 10 15

<210> 275
<211> 7
<212> PRT
<213> Homo sapiens

<400> 275

Arg Met Ser Asn Leu Ala Ser
1 5

<210> 276
<211> 32
<212> PRT
<213> Homo sapiens

<400> 276

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
1 5 10 15

Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
20 25 30

<210> 277
<211> 9
<212> PRT
<213> Homo sapiens

<400> 277

Met Gln His Ile Glu Tyr Pro Phe Thr
1 5

<210> 278
<211> 10
<212> PRT
<213> Homo sapiens

<400> 278

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
1 5 10

<210> 279
<211> 30
<212> PRT
<213> Homo sapiens

<400> 279

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
20 25 30

<210> 280
<211> 5
<212> PRT
<213> Homo sapiens

<400> 280

Asn Ser Trp Met Asn
1 5

<210> 281
<211> 14
<212> PRT
<213> Homo sapiens

<400> 281

Trp Ile Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile Gly
1 5 10

<210> 282
<211> 17
<212> PRT

<213> Homo sapiens

<400> 282

Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe Arg
1 5 10 15

Val

<210> 283
<211> 32
<212> PRT

<213> Homo sapiens

<400> 283

Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr Met Glu
1 5 10 15

Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
20 25 30

<210> 284
<211> 9
<212> PRT
<213> Homo sapiens

<400> 284

Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr
1 5

<210> 285
<211> 11
<212> PRT
<213> Homo sapiens

<400> 285

Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
1 5 10

<210> 286
<211> 1572
<212> DNA
<213> Homo sapiens

<400> 286
atggactgga cctggaggtt cctctttgtg gtggcagcag ctacaggtgt ccagtcccag 60

gtgcagctgg tgcagtctgg acctgaggtg aagaagcctg gggcctcagt gaaggtctcc 120

tgcaaggctt ctggatacac cttcaccaac tcctggatga actgggtgag gcagaggcct 180

ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat 240

gggaaattca gggtcagagt cacgattacc gcggacgaat ccacgagcac agcctacatg 300

caactgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgag aggctatgat 360

gattactcgt ttgcttactg gggccaggga accacggtca ccgtctcttc aggtggtggt 420

ggatccggag gtggtggatc gggtggtgga ggatcggata ttgtgatgac tcagtctcca 480

ctctccctgc ccgtcacccc tggagagccg gcctccatct cctgcaggtc tagtaagagt 540

ctcctgcata gtaatggcaa cacttacttg tattggttcc tgcagaagcc agggcagtct 600

ccacagctcc tgatctatcg gatgtccaac cttgcctcag gggtccctga caggttcagt 660

ggcagtggat caggcacaga ttttacactg aaaatcagca gagtggaggc tgaggatgtt 720

ggggtttatt actgcatgca acatatagaa tatcctttta cgttcggcca agggaccaaa 780

ctggaaatca aaggaggtgg tggatcgggt ggtggtggtt cgggaggcgg tggatcgcag 840

gtgcagctgg tgcagtctgg acctgaggtg aagaagcctg gggcctcagt gaaggtctcc 900

tgcaaggctt ctggatacac cttcaccaac tcctggatga actgggtgag gcagaggcct 960

ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat 1020

gggaaattca gggtcagagt cacgattacc gcggacgaat ccacgagcac agcctacatg 1080

caactgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgag aggctatgat 1140

gattactcgt ttgcttactg gggccaggga accacggtca ccgtctcttc aggtggtggt 1200

ggatccggag gtggtggatc gggtggtgga ggatcggata ttgtgatgac tcagtctcca 1260

ctctccctgc ccgtcacccc tggagagccg gcctccatct cctgcaggtc tagtaagagt 1320

ctcctgcata gtaatggcaa cacttacttg tattggttcc tgcagaagcc agggcagtct 1380

ccacagctcc tgatctatcg gatgtccaac cttgcctcag gggtccctga caggttcagt 1440

ggcagtggat caggcacaga ttttacactg aaaatcagca gagtggaggc tgaggatgtt 1500

ggggtttatt actgcatgca acatatagaa tatcctttta cgttcggcca agggaccaaa 1560

ctggaaatca aa 1572

<210> 287
<211> 524
<212> PRT
<213> Homo sapiens

<400> 287

Met Asp Trp Thr Trp Arg Phe Leu Phe Val Val Ala Ala Ala Thr Gly
1 5 10 15

Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys
20 25 30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

```
Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu
    50                  55                  60

Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn
65                  70                  75                  80

Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser
                85                  90                  95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
            100                 105                 110

Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
        115                 120                 125

Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
    130                 135                 140

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro
145                 150                 155                 160

Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg
                165                 170                 175

Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp
            180                 185                 190

Phe Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met
        195                 200                 205

Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val
225                 230                 235                 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly
                245                 250                 255

Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
            260                 265                 270

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Pro
```

```
        275                 280                 285

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser
    290                 295                 300

Gly Tyr Thr Phe Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro
305                 310                 315                 320

Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu
                325                 330                 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp
            340                 345                 350

Glu Ser Thr Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Arg Ser Glu
        355                 360                 365

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe
    370                 375                 380

Ala Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly
385                 390                 395                 400

Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
                405                 410                 415

Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser
            420                 425                 430

Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr
        435                 440                 445

Tyr Leu Tyr Trp Phe Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu
    450                 455                 460

Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser
465                 470                 475                 480

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu
                485                 490                 495

Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro
            500                 505                 510
```

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
515 520

<210> 288
<211> 354
<212> DNA
<213> Homo sapiens

<400> 288
caggtgcagc tggtgcagtc tggacctgag gtgaagaagc ctggggcctc agtgaaggtc 60

tcctgcaagg cttctggata caccttcacc aactcctgga tgaactgggt gaggcagagg 120

cctggaaagg gtcttgagtg gattggacgg atttatcctg gagatggaga aactatctac 180

aatgggaaat tcagggtcag agtcacgatt accgcggacg aatccacgag cacagcctac 240

atgcaactga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaggctat 300

gatgattact cgtttgctta ctggggccag ggaaccacgg tcaccgtctc ttca 354

<210> 289
<211> 118
<212> PRT
<213> Homo sapiens

<400> 289

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Ser
20 25 30

Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe
50 55 60

Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Gln Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr

```
           100                 105                 110

Thr Val Thr Val Ser Ser
        115
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<210> 290
<211> 336
<212> DNA
<213> Homo sapiens

<400> 290
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60

atctcctgca ggtctagtaa gagtctcctg catagtaatg gcaacactta cttgtattgg 120

ttcctgcaga agccagggca gtctccacag ctcctgatct atcggatgtc caaccttgcc 180

tcaggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240

agcagagtgg aggctgagga tgttggggtt tattactgca tgcaacatat agaatatcct 300

tttacgttcg gccaagggac caaactggaa atcaaa 336

<210> 291
<211> 112
<212> PRT
<213> Homo sapiens

<400> 291

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Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1               5                  10                  15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
            20                  25                  30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Lys Pro Gly Gln Ser
        35                  40                  45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
    50                  55                  60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65                  70                  75                  80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
                85                  90                  95
```

Ile Glu Tyr Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 292
<211> 1572
<212> DNA
<213> Homo sapiens

<400> 292
atggactgga cctggaggtt cctctttgtg gtggcagcag ctacaggtgt ccagtcccag 60

gtgcagctgg tgcagtctgg acctgaggtg aagaagcctg gggcctcagt gaaggtctcc 120

tgcaaggctt ctggatacac cttcaccaac tcctggatga actgggtgag gcagaggcct 180

ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat 240

gggaaattca gggtcagagt cacgattacc gcggacgaat ccacgagcac agcctacatg 300

gagctgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgag aggctatgat 360

gattactcgt ttgcttactg gggccaggga accacggtca ccgtctcttc aggtggtggt 420

ggatccggag gtggtggatc gggtggtgga ggatcggata ttgtgatgac tcagtctcca 480

ctctccctgc ccgtcacccc tggagagccg gcctccatct cctgcaggtc tagtaagagt 540

ctcctgcata gtaatggcaa cacttacttg tattggttcc agcagaagcc agggcaggct 600

ccacggctcc tgatctatcg gatgtccaac cttgcctcag gggtccctga caggttcagt 660

ggcagtggat caggcacagc ttttacactg aaaatcagca gagtggaggc tgaggatgtt 720

ggggtttatt actgcatgca acatatagaa tatcctttta cgttcggcca agggaccaaa 780

ctggaaatca aaggaggtgg tggatcgggt ggtggtggtt cgggaggcgg tggatcgcag 840

gtgcagctgg tgcagtctgg acctgaggtg aagaagcctg gggcctcagt gaaggtctcc 900

tgcaaggctt ctggatacac cttcaccaac tcctggatga actgggtgag gcagaggcct 960

ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat 1020

gggaaattca gggtcagagt cacgattacc gcggacgaat ccacgagcac agcctacatg 1080

gagctgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgag aggctatgat 1140

gattactcgt ttgcttactg gggccaggga accacggtca ccgtctcttc aggtggtggt 1200

ggatccggag gtggtggatc gggtggtgga ggatcggata ttgtgatgac tcagtctcca 1260

ctctccctgc ccgtcacccc tggagagccg gcctccatct cctgcaggtc tagtaagagt 1320

ctcctgcata gtaatggcaa cacttacttg tattggttcc agcagaagcc agggcaggct 1380

ccacggctcc tgatctatcg gatgtccaac cttgcctcag gggtccctga caggttcagt 1440

ggcagtggat caggcacagc ttttacactg aaaatcagca gagtggaggc tgaggatgtt 1500

ggggtttatt actgcatgca acatatagaa tatcctttta cgttcggcca agggaccaaa 1560

ctggaaatca aa 1572

<210> 293
<211> 524
<212> PRT
<213> Homo sapiens

<400> 293

Met Asp Trp Thr Trp Arg Phe Leu Phe Val Val Ala Ala Ala Thr Gly
1 5 10 15

Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys
20 25 30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe
35 40 45

Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu
50 55 60

Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn
65 70 75 80

Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser
85 90 95

Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
115 120 125

Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly
130 135 140

Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro
145 150 155 160

Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg
165 170 175

```
Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp
            180                 185                 190

Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Arg Met
        195                 200                 205

Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser
    210                 215                 220

Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val
225                 230                 235                 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly
                245                 250                 255

Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly
            260                 265                 270

Gly Ser Gly Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Pro
        275                 280                 285

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser
    290                 295                 300

Gly Tyr Thr Phe Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro
305                 310                 315                 320

Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu
                325                 330                 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp
            340                 345                 350

Glu Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu
        355                 360                 365

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe
    370                 375                 380

Ala Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly
385                 390                 395                 400
```

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Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Asp Ile Val Met
                405                 410                 415

Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser
            420                 425                 430

Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr
        435                 440                 445

Tyr Leu Tyr Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu
    450                 455                 460

Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser
465                 470                 475                 480

Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu
                485                 490                 495

Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro
            500                 505                 510

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
        515                 520
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<210> 294
<211> 354
<212> DNA
<213> Homo sapiens

<400> 294
caggtgcagc tggtgcagtc tggacctgag gtgaagaagc ctggggcctc agtgaaggtc 60

tcctgcaagg cttctggata caccttcacc aactcctgga tgaactgggt gaggcagagg 120

cctggaaagg gtcttgagtg gattggacgg atttatcctg gagatggaga aactatctac 180

aatgggaaat tcagggtcag agtcacgatt accgcggacg aatccacgag cacagcctac 240

atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaggctat 300

gatgattact cgtttgctta ctggggccag ggaaccacgg tcaccgtctc ttca 354

<210> 295
<211> 118
<212> PRT
<213> Homo sapiens

<400> 295

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Ser
20 25 30

Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe
50 55 60

Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Thr Val Thr Val Ser Ser
115

<210> 296
<211> 336
<212> DNA
<213> Homo sapiens

<400> 296
gatattgtga tgactcagtc tccactctcc ctgcccgtca cccctggaga gccggcctcc 60

atctcctgca ggtctagtaa gagtctcctg catagtaatg gcaacactta cttgtattgg 120

ttccagcaga agccagggca ggctccacgg ctcctgatct atcggatgtc caaccttgcc 180

tcaggggtcc ctgacaggtt cagtggcagt ggatcaggca cagcttttac actgaaaatc 240

agcagagtgg aggctgagga tgttggggtt tattactgca tgcaacatat agaatatcct 300

tttacgttcg gccaagggac caaactggaa atcaaa 336

<210> 297
<211> 112
<212> PRT

<213> Homo sapiens

<400> 297

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser
20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Gln Gln Lys Pro Gly Gln Ala
35 40 45

Pro Arg Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro
50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Ile Glu Tyr Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 298
<211> 30
<212> PRT
<213> Homo sapiens

<400> 298

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala
1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
20 25 30

<210> 299
<211> 14
<212> PRT
<213> Homo sapiens

<400> 299

Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile Gly
1 5 10

<210> 300
<211> 32
<212> PRT
<213> Homo sapiens

<400> 300

Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr Met Gln
1 5 10 15

Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
20 25 30

<210> 301
<211> 11
<212> PRT
<213> Homo sapiens

<400> 301

Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
1 5 10

<210> 302
<211> 23
<212> PRT
<213> Homo sapiens

<400> 302

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys
20

<210> 303
<211> 15
<212> PRT
<213> Homo sapiens

<400> 303

Trp Phe Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr
1 5 10 15

<210> 304
<211> 32
<212> PRT

<213> Homo sapiens

<400> 304

Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr
1 5 10 15

Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
20 25 30

<210> 305
<211> 10
<212> PRT
<213> Homo sapiens

<400> 305

Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
1 5 10

<210> 306
<211> 32
<212> PRT
<213> Homo sapiens

<400> 306

Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr Met Glu
1 5 10 15

Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
20 25 30

<210> 307
<211> 15
<212> PRT
<213> Homo sapiens

<400> 307

Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
1 5 10 15

<210> 308
<211> 32
<212> PRT
<213> Homo sapiens

<400> 308

```
Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
1               5                   10                  15

Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
            20                  25                  30
```